

# THE NEW PHYSICAL EDUCATION

A PROGRAM OF  
NATURALIZED ACTIVITIES FOR EDUCATION  
TOWARD CITIZENSHIP

BY

THOMAS DENISON WOOD, A.M., M.D.

PROFESSOR OF PHYSICAL EDUCATION, TEACHERS COLLEGE, COLUMBIA  
UNIVERSITY; CHAIRMAN, JOINT COMMITTEE ON HEALTH PRO-  
BLEMS IN EDUCATION OF THE NATIONAL EDUCATION ASSO-  
CIATION AND AMERICAN MEDICAL ASSOCIATION

AND

ROSALIND FRANCES CASSIDY, A.M.

PROFESSOR OF PHYSICAL EDUCATION; CHAIR-  
MAN, DEPARTMENT OF HYGIENE AND  
PHYSICAL EDUCATION, MILLS COLLEGE

New York

THE MACMILLAN COMPANY

1927

*All rights reserved*

PRINTED IN THE UNITED STATES OF AMERICA

COPYRIGHT, 1927,  
BY THE MACMILLAN COMPANY.

---

Set up and electrotyped. Published July, 1927. Reprinted  
December, 1927.

Norwood Press  
J. S. Cushing Co. — Berwick & Smith Co.  
Norwood, Mass., U.S.A.

## DEDICATION

To all teachers of physical education, this volume is earnestly dedicated, with the knowledge and conviction that upon you depends the opportunity of children and youth for participation in a naturalized activity program which will insure to the potential citizens indispensable factors for healthful physical, mental, moral, and social development through childhood and youth; and adequate continuing interests, ideals, and habits for abundant, useful, and therefore happy adult lives.

## PREFACE

THIS book is a response to the continual demand made during recent years for a printed text on the natural program in physical education which has had its center in America, and significant beginnings in the Department of Physical Education at Teachers College, Columbia University. The theory and practice in this program have been in a constant state of growth and development; hence it has been the consensus of opinion of the group working on this material, that it would not be wise to print a text until the program was thoroughly formulated, for fear of promoting misunderstandings among physical educators who still cling to older forms of procedure and are unwilling or unable to approach newer ideas with open minds.

The natural program has now had fifteen years of earnest, devoted, scientific research in the formulation, application, and testing of theory and practice. It is still in a state of growth and always will be, if it remains consistent with its basic ideas and underlying principles. It is therefore in answer to the insistent and growing demand for a text and guide in the natural program that this material is formulated for publication.

The use of "naturalized" instead of "natural" in the title of this book may need, for some readers, brief explanation. A rational program of physical education activities must be grounded in the original nature of the human being, and must provide satisfying expression in vigorous action for the wholesome, natural instincts and impulses of children and youth.

However, provision for original nature and natural impulses is not enough; hence, the word "naturalized" is used here to explain the conviction of the authors that a program of physical education which is scientifically, socially, and educationally sound must not only make generous provision for the satisfying expression of natural demands and impulses for action, but must also give recognition and adequate place to modifications, adaptations, and additions, in response to racial, national, community, vocational, avocational, and individual needs in our present civilization.

The word "system" is intentionally omitted in this book. In place of a system is presented a program of physical education activities which is organized with full respect for human nature and its desirable original, inherited impulses; and further one which is effectively adapted to the needs of each individual and each group of individuals in a community, a state, a nation. Such a program is, then, more than a natural program; it is in the best sense of the term a naturalized program. The naturalized program here discussed will include a body of principles providing interpretation of, and sanction for, the practical programs which are proposed. Such is the main purpose of this book.

It is further the earnest desire of the authors that the two other purposes of this book may be accomplished: first, to prove the scientific basis of a naturalized program of activity—that is truly educational, and therefore the logical and necessary program for children in this American democracy; second, to answer the demand for definite printed facts on the history, scientific basis, aims, content, and method of a natural program. This will serve primarily as a guide to modern teachers, but also, we trust, will serve as a just interpretation of this educational program.

Some teachers may be disappointed not to find in this book the traditional course of study with directions for daily use in each grade. It is as impossible in this program to tell the teacher just what to do each day in each grade as it is in texts written on the project method in education. The naturalized method is definite; the procedure grows out of the problems and situations which arise with each class and group of children, and is different in each case, depending on the interests, initiative, and originality of the children in each particular class, as well as on the intelligent and wise leadership of the teacher. However, every effort has been made to include all possible suggestive material of practical use to the teacher.

The authors owe much to those whose practical contributions to the new physical education have been used in the preparation of this book. They wish to acknowledge indebtedness especially to Dr. John Dewey, Dr. William Heard Kilpatrick, Dr. Frank M. McMurry, and Dr. Edward L. Thorndike, whose contributions to psychology, philosophy, and education have been of indispensable value to the early stages in the development of the natural program in physical education.

THOMAS D. WOOD  
ROSALIND CASSIDY

# CONTENTS

CHAPTER	PAGE
I. THE NATURAL MOVEMENT IN PHYSICAL EDUCATION .	1
The Comparative Backwardness of Physical Education .	1
The Fundamental Principles of the Natural Movement .	3
The Last Twenty Years . . . . .	9
II. PRESENT STATUS OF THE NATURAL MOVEMENT . .	14
The Program of Eight Units . . . . .	14
The Attitude of Educators . . . . .	16
III. IMMEDIATE PROBLEMS . . . . .	20
Development of the Program . . . . .	20
Development of an Attitude . . . . .	22
IV. THE PHILOSOPHY OF MODERN PHYSICAL EDUCATION . .	25
Older Philosophies . . . . .	25
The Philosophy of Modern Education . . . . .	26
The Philosophy of Modern Physical Education . . . .	28
V. CONTRIBUTION OF MODERN PSYCHOLOGY TO THE NATURAL MOVEMENT IN PHYSICAL EDUCATION . . . . .	34
The Work of James and Thorndike . . . . .	34
The Psychological Basis of the Natural Program . . .	40
VI. CONTRIBUTIONS OF MODERN BIOLÒGY, PHYSIOLOGY, AND SOCIOLOGY . . . . .	45
The Contribution of Biology . . . . .	45
The Contribution of Physiology . . . . .	49
The Contribution of Sociology . . . . .	50
VII. CONTRIBUTIONS OF MODERN EDUCATIONAL THEORY AND PRACTICE . . . . .	56
Educational Theory after 1750 . . . . .	56
The Relation of General Education to Physical Education	60
VIII. THE NEW DECALOGUE OF PHYSICAL EDUCATION . .	62
IX. OBJECTIVES IN NATURALIZED PHYSICAL EDUCATION .	65
General Objectives . . . . .	65

CHAPTER	PAGE
Specific Biological Objectives . . . . .	66
Specific Social and Ethical Objectives . . . . .	72
Specific Intellectual Objectives . . . . .	81
X. CONTENT OF A NATURALIZED PROGRAM . . . . .	86
Definitions . . . . .	86
Units of Content . . . . .	89
XI. THE PLACE OF NATURAL GYMNASTICS AND TECHNIQUE IN A NATURALIZED PROGRAM . . . . .	105
XII. AN ILLUSTRATIVE LESSON FOR EACH GRADE, SHOWING PROPORTION OF CONTENT . . . . .	110
For Grades I-IX . . . . .	110
For the Senior High School . . . . .	114
XIII. MAKING A NATURALIZED PROGRAM . . . . .	117
The Methods and the Aims of Curriculum Making . . . . .	117
Lesson Plans . . . . .	123
Suggested Natural Physical Education Projects for the Grades . . . . .	125
XIV. A SUGGESTED CURRICULUM IN NATURALIZED ACTIVITIES FOR THE ELEMENTARY SCHOOL . . . . .	129
XV. MEASURING ACHIEVEMENT IN A NATURALIZED PROGRAM Scales of Growth, Knowledge, Skills and Habits, and Attitudes for a Program of Naturalized Activity . . . . .	153
XVI. THE USE OF ACHIEVEMENT SCALES FOR COLLEGE INTRANTS Scales of Growth, Knowledge, Skills and Habits, and Attitudes for a Program of Naturalized Activity . . . . .	182
XVII. COMPARISON OF TRADITIONAL AND NATURALIZED PHYSICAL EDUCATION ACTIVITIES . . . . .	195
XVIII. THE SIGNIFICANCE OF THE LEARNER'S METHOD OF STUDY . . . . .	207
The Importance of Method . . . . .	207
Method in the Natural Program . . . . .	213
XIX. THE NATURAL METHOD IN PHYSICAL EDUCATION . . . . .	217
Teaching the Child to Study and Think in Physical Education . . . . .	217
Testing . . . . .	227
XX. PROBLEMS, PROJECTS, AND PROGRAMS ILLUSTRATING THE NATURAL METHOD IN PHYSICAL EDUCATION . . . . .	232



# CONTENTS

xiii

CHAPTER	PAGE
XXI. AN EXPERIMENTAL PROGRAM IN NATURALIZED ACTIVITIES (by <i>Helen Norman Smith</i> ) . . . . .	263
The Twenty-third District School . . . . .	263
The University of Cincinnati . . . . .	267
XXII. ADAPTABILITY OF NATURALIZED MATERIAL FOR SCHOOL-ROOM USE . . . . .	273
XXIII. THE TEACHER OF A NATURALIZED PROGRAM OF PHYSICAL EDUCATION . . . . .	278
Personal Qualities . . . . .	278
Training . . . . .	281
Experience . . . . .	284
XXIV. THE TEACHER AND THE AIMS . . . . .	289
XXV. THE TEACHER AND THE NATURALIZED METHOD . . . . .	296
Knowledge of Theory and Practice in General Education . . . . .	296
Adaptation of Theory to Specific Situations . . . . .	300
Organization . . . . .	305
XXVI. THE SUPERVISOR OF A NATURALIZED PROGRAM . . . . .	316
XXVII. QUESTIONS TO TEST THE QUALITY OF THE TEACHING . . . . .	325
Preparation for Play . . . . .	325
The Lesson . . . . .	327
XXVIII. SIGNIFICANT MOVEMENTS IN PHYSICAL EDUCATION . . . . .	333
Greek Physical Education . . . . .	333
Formal Gymnastics . . . . .	338
Health Education . . . . .	343
The Playground Movement . . . . .	346
The Folk Dance Movement . . . . .	346
Pageants and Festivals . . . . .	347
The Camping Movement . . . . .	347
Scouting and Similar Organizations . . . . .	348
The Primitive Gymnastics Movement in Denmark . . . . .	350
XXIX. SUMMARY IN QUESTIONS AND ANSWERS . . . . .	353
CLASSIFIED LIST OF SOURCE MATERIALS . . . . .	369
BIBLIOGRAPHY . . . . .	377
APPENDIX . . . . .	391
INDEX . . . . .	411

# THE NEW PHYSICAL EDUCATION

## CHAPTER I

### THE NATURAL MOVEMENT IN PHYSICAL EDUCATION

"The worst of the systems of physical culture is that they are apt to become chronic and therefore useless and morbid like ascetic self-chastisement. A man was never meant to contract his muscles for the sake of exercise. Muscular contraction should be the physical expression, the outer end of a plan. We should move to get something, or kill something, in work as in sport, and with consciousness focused always on the end, never on the means."

RICHARD C. CABOT.

The natural movement in physical education, growing out of many and varied elements in our national life, is spreading rapidly over this country. It has had tangible form less than twenty years, and yet its appeal is so vital and the ideas which it embodies so rational and important to the development of physical education in America that it seems wise to review the development during these twenty years, to look to the reasons for such ideas and practices, and to take a survey, if possible, of its tendencies in future growth.

The contents of the pages which immediately follow are quoted from or based directly upon material prepared by the senior author of this book in 1910.<sup>1</sup>

### THE COMPARATIVE BACKWARDNESS OF PHYSICAL EDUCATION

**General education further advanced than physical education.** — It is apparent to many, however, that physical

<sup>1</sup>Wood, T. D., *Ninth Yearbook of the National Society for the Study of Education* (1910), pp. 79-90.

education, more particularly in the public school systems of this country, has, on the whole, lacked the support of a well organized body of thought which is in harmony with the best current educational practice. To many, again, it is evident that the principles of physical education, even as formulated, have not kept pace with general educational practice. The reasons for this are briefly:

1. There has not been, until very recent years, a recognition of the broader social scope of education with the implied obligation to the physical and social as well as to the intellectual and moral needs of the pupils. Modern psychology and physiology show the vital and intimate interdependence of the physical, intellectual, and moral.

2. Many physical educators have been ignorant of the general principles and tendencies of education.

3. General educators have given little attention to the study of physical education.

4. Physical educators have been too narrowly trained. They think of and deal with physical education as a detached problem. Many receive their training in special normal schools away from the atmosphere of general education.

**Past mistakes.** — In the past, physical education has sought simply health values. It is most desirable that physical education should occupy itself with a program of activity for the young which would secure these physical results without fail, as by-products, as it were, while the pupil is being guided in the acquirement of mental, moral, and social benefits.

Again, physical education has been too much occupied with formal exercises that are either artificial or merely corrective.

1. It has sought certain postural and corrective results which are not, after all, satisfactorily obtained in class

exercise by formal movements involving the consciousness of muscle and body, by the pupil. These results, except as obtained in individual cases by remedial gymnastics, may be gained, in the main, as well, or better, through exercises which are more natural, spontaneous, and enjoyable.

2. It has trained the body too much within itself and without sufficient regard for the attitudes of the mind and for the indirect effects of exercise upon disposition and personality.

3. It has developed various forms of ability which are not, in identity or analogy, closely enough related to the interests and activities of human life to justify the time and effort given them.

#### THE FUNDAMENTAL PRINCIPLES OF THE NATURAL MOVEMENT

The following selections show certain fundamental ideas upon which the theory of the natural movement is based.

**Learning by doing.** — The main function of education, perhaps, is to train the human mechanism toward efficiency as an instrument of self-expression with reference to the various responsibilities and opportunities of life, at the time and later. The child learns far more of permanent value through what he does (and this always means neuro-muscular action of some sort) than through what he sees or hears or perceives in any way directly with the five senses.

**Complete motor training.** — The psychology of movements performed on the gymnasium floor or in the playground involves the same elements and principles as those belonging to classroom, laboratory, and studio, and in a particular case the former may involve richer content and more important result than the latter. If the motor training and experience of the child are complete or satisfactory, even

from the broader psychological standpoint, then, so far as muscular activity and exercise can secure these results, the child, as a rule, will have favorable posture and physique, organic health and vigor, facility and efficiency in action, and aptitude and power for the tasks which may be reasonably demanded during a life career.

**Agreement with modern educational theory.** — When physical education presents a program which is psychologically and physiologically sound and therefore pedagogically acceptable, it will find itself in organic relationship with education as a whole and with the other subjects or departments represented.

**Concrete goals in activity.** — This proposed program looks to the process of human evolution for general guidance concerning a part of the method to be pursued. Primitive men, our ancestors more or less remote, became strong and healthy; developed physical and moral powers, through play in childhood and by doing very real things in hunting and fishing, in agriculture, in war, in industry, in commerce, in supplying human needs; but always in immediate unconsciousness of self, without understanding what went on in muscle and nerve. They were expressing ideas clamoring for utterance, or engaged in accomplishing tasks with concrete and absorbing goals in actual or in mental view. Children and young people must do things today, not necessarily identified in type and purpose with those of primitive life, but in the same general spirit and manner if the method is to be effective and the results satisfactory.

**Conditions necessary for satisfactory results.** — For the best results in physical education there must be certain conditions:

*An out-of-door situation.* — The work must be out of doors; the gymnasium should be used only as an emergency space.

*Separation of boys and girls at twelve years.* — Separate physical education programs for boys and girls are required, beginning with the preadolescent period.

*Medical examination.* — The adaptation of material to individual needs presupposes a medical examination.

*Exercises related to future needs.* — The exercises should be natural in type, satisfying by their execution the play instinct and the fundamental powers and faculties as they develop, with due regard to the ancestral habits of activity and to the future practical needs of the individual. Not every possible action of voluntary muscles and nerves is desirable in education, by any means, even though this action may strengthen muscles and nerve structure, develop exact control, enhance power of coördination, and bring results which seem to fulfill the conditions of improvement. We are learning by practical experience and through the teachings of the newer psychology, which aims to interpret this experience through the doing of things which correspond in type and quality, in the main motives and reactions, to the worthy deeds of the race and more particularly to the actual work and conduct of humanity today.

Education, whether in physical training or other branches, should secure to the pupil beyond mere bread and butter needs, the ability to meet the wider opportunities and the possible emergencies in life; but the performance of tasks requiring primarily subjective control of action, and aimed too directly (and by a short cut) at benefit to bodily health or mental faculty, may not only fail to accomplish its direct purpose, but also fall short of the intended indirect benefit to other faculties and powers. There are many fancy stunts, as well as exact and intricate performances in various branches of education which lack rational sanction from modern educational theory. In the past they have been

considered extremely valuable, not only because they are showy, but because they furnish drill and discipline. They are dropping very rapidly out of use in relation to reading, spelling, writing, manual training, and most of the departments of teaching.

Formal gymnastics, free-hand movements (for the most part), and much of the apparatus work of the gymnasium belong to the category of artificial stunts and mechanical movements; they lack the purpose, mental content, and objective which are essential to sensible educational performances. Most of the free-hand exercises, particularly, are mechanically rigid, jerky, and awkward as compared with natural, useful movements of the body. They are uninteresting and distasteful to most boys and girls, except in the early elementary grades, when they are considered, even by the physical educator, relatively less important.

Formal gymnastics in physical education correspond to drugs in medical practice. The movement even in medical treatment is away from the use of drugs. In a similar way progress in physical education must be away from all formal, artificial kinds of movement.

It is important that a reasonable amount of physical education should be required of every pupil and student in school and college. It is equally important that this training should enlist the enthusiasm and interest of each pupil, not primarily in keeping healthy, but in the doing of things having intrinsic objective interest, whose performance will insure good health. Much of the required physical education at present cultivates a dislike for healthful exercise. This is inexpressibly unfortunate and forms an indictment against such instruction, inasmuch as one of the most important purposes of physical education should be to cultivate the liking for rational, pleasurable, healthful exercise.

*A definite objective.* — In physical education as in other branches, the pupils in practice should either (1) express an idea, feeling, or emotion, which seems worth expressing, e.g. in dancing, pantomime, or other forms of dramatic representation, or (2) work toward some definite goal to be attained as the result of the muscular effort performed, as in maintaining a squad formation in marching, hitting a ball, throwing a ball into a basket, swimming to a given point, outrunning a competitor, or any of the infinite number of things to be done in games. Given a rational observance of sanitary and hygienic practices in the schoolroom, and a fair amount of time for play and recreation in fundamental motor training, all the desirable qualities of health in structure and function of the body will accrue to the child without the artificial movements already referred to, except in individual cases (which will be fewer as education becomes more hygienic) where the most exact and accurately applied movements should be used, like medicine or surgery, to correct individual weaknesses and tendencies.

*Correlation with other subjects.* — The activities in physical education should be correlated wherever feasible with the subjects and activities with which the child is occupied elsewhere in the school, or outside. It seems important for many reasons that the more accessory, specialized, symbolic modes of expression in education should be reinforced and broadened by the larger and vital forms of action which physical education may and should provide. To utilize the opportunities for correlation, it is necessary that the teacher or supervisor of physical education be acquainted with the curriculum and the work of the school as a whole.

*A natural gymnastic technique.* — Gymnastic technique (as distinguished from marching, dancing, games, athletics), when used under the head of formal gymnastics or other titles,



should consist in the practice of movements involved in actual and natural kinds of performance, or closely related in form to such movements, for the purpose of acquiring greater strength and skill, so that the complete action or original performance may be more effectively executed. Such technical practice is ordinarily better performed through individual exercise. It is possible, however, to practice advantageously some of the larger movements involved in dancing and games, in class instruction. Children even in the elementary grades may devise movements and construct gymnastic drills which will secure the physiological results; e.g. a third grade class constructed a gymnastic drill which was designed to improve ability in rope climbing. This drill naturally lacked the mechanical precision of Swedish gymnastics but it possessed enough value of another kind to more than make up for what was lost.

*Gymnastic procedure based on real conduct in life.* — Mechanical uniformity and precision of movement in a group or class of children can logically be demanded, not primarily or simply because the teacher asks for or orders it, or because it appears better to the spectator, but only because the situation expressed as an external problem requires it. It is significant and illogical that the gymnasium is practically the only place in school where uniformity in action is expected of pupils in a grade. In the future, gymnastic technique must be reconstructed in relation to real conduct in life, to meet psychic and functional needs rather than the mechanical, anatomic standards of precision which prevail so largely at present.

*Lack of self-consciousness.* — The pupil, while intent upon some external result in individual or coöperative effort, should be unconscious of his own body or of the purpose of exercise to benefit his own body or health. Self-con-