

MEASUREMENT AND
ADJUSTMENT SERIES

EDITED BY LEWIS M. TERMAN

MENTAL TESTS AND
THE CLASSROOM
TEACHER

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THE HOUSE OF APPLIED KNOWLEDGE

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Scientific method in education involves the careful measurement of each child's ability to learn and of the amount that he has learned. It also involves adjustment of organization, subject matter, and methods of instruction to the varying needs and abilities of pupils. This book is one of a series that sets forth the value, technique, and applications of educational measurement and adjustment. It describes the varied uses of tests in grading, classification, educational guidance, and the improvement of teaching in a large school system

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PREFACE

FIVE years ago mental testing was almost unknown in the public schools except in a few cities in which tests were made to discover those who were mentally defective for placement in a special class. Now the movement has grown to immense proportions. Hundreds of thousands, if not millions, of school children are being tested annually. Schools in almost all large cities and in many towns and country districts are making extensive use of mental test results. It is but natural that a movement that has grown so rapidly and that deals with a problem so intangible as the measurement of intelligence should be mismanaged at times. It has been misinterpreted and misunderstood. Extravagant claims have been made about what could be done by means of the tests. Mental tests and individual differences in intelligence are subjects of common discussion. Newspapers and magazines have contributed hundreds of articles, and the lay public has been aroused by lectures on "applied psychology." Teachers are using tests, and often on the basis of a single test are making decisions that may seriously affect the life of a child. What is a reasonable attitude for the teacher to take? What use can she make of the tests? What cautions should she observe? The newness of the field, the imperfections of tests, the multiplication of test methods, the credulity of some people and the suspicion of others regarding the value of tests, the rôle tests are capable of playing in the organization or disorganization of a school system — these facts demand that teachers be instructed in the use of tests and be cautioned concerning the dangers involved.

The author has pointed out what he believes to be a safe and sensible path for the teacher to take. The advice given is based upon extensive experience in the use of tests in

school systems enrolling hundreds of teachers and thousands of children.

This book is written primarily for teachers. However, it should prove a helpful guide to principals, supervisors, and school administrators in general. It is planned for use in teachers' reading circles and for normal school and college classes in mental testing. The contents of each chapter have been arranged in topical form for clearness in class use. Technical terms have been avoided. Only sufficient data are presented to show a scientific basis for the attitude taken. At the close of each chapter is a selected bibliography. No effort has been made to make this exhaustive; only a few references have been listed, and these are of a kind that even the busy teacher may well take time to read if she wishes to make more extensive study along the lines suggested by the chapter.

It has not been the aim of this book to present the technique of giving and scoring tests; this can be readily obtained from the manuals that have been written for each set of tests. The purpose of the book is to show (1) Why mental tests are needed, (2) What they are like, (3) How they can be made most useful.

To Elise H. Martens, assistant director of the Bureau of Research and Guidance in Oakland, the author is indebted for untiring assistance in the preparation and revision of the manuscript of the entire book. Mr. John K. Norton assisted in outlining the plan of the book and in the writing of Chapters III and IV.

VIRGIL E. DICKSON

EDITOR'S INTRODUCTION

IT is the belief of the editor that few educational books have appeared in the last two decades as significant as Dr. Dickson's *Mental Tests and the Classroom Teacher*. Certainly it is by far the most helpful treatment to date on the practical use of intelligence tests in the schoolroom. It fills a need that has become very obvious and very urgent. All will admit that the testing movement which is now sweeping the educational world is much less fruitful of practical results than it ought to be. The merit of Dr. Dickson's book is that it interprets this movement in terms of everyday classroom practice.

The author's experience as a public school teacher, as a trainer of teachers in a normal school, as a city superintendent of schools, and finally as director of research and guidance in two large city school systems, has given him a grasp of the educational situation that has made it possible for him to give a balanced treatment of the entire subject. His book will appeal equally to superintendents, principals, classroom teachers, and students of education. It should dispel the last lingering doubt in any unprejudiced mind as to the value of intelligence tests in the educational program.

The success of the author's treatment is due largely to the fact that it is based upon a wealth of experience rather than upon plausibly formulated theories. In fact, Dr. Dickson's experience in the educational use of test results has probably been more extensive than that of any other living educator. One of the first to institute an extensive testing program in the schools, he was the very first to make such a program the basis of a thoroughgoing reclassification of children for purposes of instruction. The net results of all this experi-

ence have here been set forth in a simple and straightforward style that evidences a rare ability to organize and present material in a way to make it comprehensible, convincing, and helpful to all classes of teachers.

Especially characteristic of this book is its sanity. The reader will quickly sense the fact that the author has viewed his subject from every angle. He is not one of those who believe in the infallibility of intelligence tests or in their adequacy when used as the sole basis of classification. He points out frankly the possibilities of error in test results and the dangers that are sure to follow from their rash or ill-advised use. In view of the author's unequalled experience with tests his words of caution along this line should carry very great weight. In the school systems of Oakland and Berkeley he has shown how it is possible to test and reclassify fifty thousand school children without arousing the slightest opposition on the part of parents, teachers, or the community at large. He has accomplished this by the use of professional judgment and common sense, not by skillful advertising or persuasive eloquence.

One of the author's most important contributions is to show that the differentiation of curricula and the classification of school children according to ability, far from being undemocratic measures, are absolutely essential if the public school is to be made a real instrument of democracy. He rightly holds that it is as unjustifiable and dangerous for the educator to prescribe the same educational treatment for all as it would be for a physician to prescribe the same medical treatment for all. He holds that true democracy does not rest upon equality of endowment, but upon equality of opportunity. This equality of opportunity is something the schools have hitherto in a measure withheld. Reclassification of children and differentiation of courses of study along the lines laid down in this book will go far toward insuring

that every pupil, whether mentally superior, average, or inferior, shall have a chance to make the most of whatever abilities nature has given him.

The educational significance of intelligence testing is so far-reaching, both for classroom practice and for school organization, that Dr. Dickson's authoritative treatment of the subject deserves to be studied by every teacher and by every school administrator in the United States. It should also appeal strongly to women's clubs, parent-teacher associations, and other groups interested in education.

LEWIS M. TERMAN

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MENTAL TESTS AND THE CLASSROOM TEACHER

CHAPTER ONE

SOME SIGNIFICANT TRENDS IN AMERICAN EDUCATION

Three periods in the development of public education in America. In order to work intelligently with problems confronting us in the public schools of today, it is necessary to have before us some of the facts concerning the development of the school as a public institution in America. From the earliest colonial times to the present, there have been three rather distinct changes in our general conception of the place and purpose of education.

During the first of these periods education was confined largely to private instruction given to those able to pay for it. Such was the case in this country as a whole until the middle of the nineteenth century. The second period saw the acceptance of the idea of free public schools for all children who wished to attend. Voluntary education at the expense of the state became the current practice of most of the Northern states by 1850. The third period, that of today, is characterized by a general acceptance of the principle of compulsory education. All children who are physically and mentally fit must attend free schools or furnish evidence of equivalent training obtained elsewhere. Effective operation of compulsory education has developed in the majority of states only within the last quarter of a century.

Education first a luxury, then a privilege. In colonial times education was mainly for the few who desired it in order to prepare for the clergy, or for children of wealth whose parents had a certain standard of culture to maintain. For the latter, education was a luxury rather than a necessity. Naturally, under such conditions, the school was recruited

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almost entirely from the superior classes, and those who were not mentally capable were quickly left by the wayside as unprofitable subjects. Soon, however, the fact that religion was regarded as a personal matter for each individual to consider for himself began to have its effect on education. If each person is responsible for his soul's salvation, then each should know his Bible. Every one, therefore, should know how to read. This religious point of view had a profound effect in bringing about the change permitting all children to attend a public school. Agitation for public taxation for schools for all the children was fought bitterly during the first half of the nineteenth century. Those who opposed free schools usually advanced the idea that citizens who had no children to educate should not be held responsible for the education of other people's children. Jones would say, "You might just as well demand my plow to plow Smith's field as take my money to educate Smith's children." However, one state after another was added to the list offering free public schools, until, by 1850, these had spread throughout the North. Soon after the Civil War they became general throughout the South also.

Education becomes a duty. The third period came as a logical and inevitable development from the second. Once education had been recognized as so necessary to public welfare as to justify taking Jones's money to provide schools for Smith's children, it was an easy step to the conclusion that Smith has no right to keep his children out of school when free educational facilities have been provided for them. The citizens of a democracy need to be educated. Therefore Smith *must* send his children to school. "Every child has the right to an education," a right which takes precedence over any right the parent may have to the child's service at home. The rights of childhood must be protected by the society of which he is now a part, and in which he will soon

become a factor with voting power. Consequently one state after another changed the *permission* to attend the public school into an *obligation* to attend, until, by 1900, nearly all the states of the Union had compulsory education laws written upon their statute books. The execution of these laws, however, has proved difficult; for, until very recent years, a large body of the population has sought to evade them whenever for any reason it seemed desirable or profitable for their children to be kept at home or sent to work. As evidence of this difficulty it is only necessary to point to many complexities facing the attendance officers of almost every city and county in America, even at the present time.

The earlier compulsory education laws generally required attendance for only three or four months of the school year; furthermore, children under eight years and over twelve years of age were usually exempt. Development has steadily taken place, with the result that at the present time children are required in most states to attend school for the complete yearly session. The age limit likewise has been extended, particularly at the upper end, where it varies at present in different states from thirteen to sixteen years of age. Within the last decade some twenty states have taken a further step forward by passing compulsory "part-time" laws, which require children to attend school for at least a part of the time until the age of sixteen or eighteen years.

Changes in school organization. The development of a system of free compulsory education has brought about important changes in the mechanical organization of schools. In the days of exclusively private instruction the school-master taught all who were sent to him, each in accordance with his ability to master the work laid down in the textbooks. In time there developed the primary school and the grammar school, providing for a certain amount of differentiation among pupils according to age. When schools