

**EDUCATIONAL MEASUREMENT
IN
HIGH SCHOOL**

The Century Education Series

EDUCATIONAL MEASUREMENT
IN
HIGH SCHOOL

BY

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PREFACE

The chief justification for the appearance of this volume dealing with a relatively small division of the whole field of educational theory and practice which is already covered by two excellent treatises is that progress therein is so rapid that there is much new material worth presenting. In the more than three years since both of the treatises referred to appeared, the number of standardized and near-standardized tests suitable for use in the secondary school has increased at least 50 per cent, perhaps even 100 per cent. Not only has there been this increase in the total number, but in several school subjects and other fields of educational measurement, almost all the tests and scales now available have been published within this period.

This book may be thought of as a companion volume to the writer's *Traditional Examinations and New-Type Tests* in that the two together attempt to cover rather completely the measuring and marking of high-school pupils, the earlier one dealing with tests made by the teacher and this with standardized or commercially available tests. It has been written with both the student preparing to teach and the teacher already in service in mind, and it is hoped that the needs of both have been met. It is intended to be elementary enough for the tyro in educational measurement to understand, and yet critical enough to serve as a safe guide in the actual administration of measuring instruments and use of the results secured from their application.

Since so much has already been done and written along the line dealt with, the writer is under obligations to many previous workers. Chief among these are Professors G. M. Ruch and G. D. Stoddard, whose volume *Tests and Measurements in High School Instruction* supplied many data on reliability and other helps, and Professor P. M. Symonds, whose *Measurement in Secondary Education* was an ever-present aid. Thanks are also due many authors and publishers of tests who responded to requests for numerous items of unpublished information.

C. W. ODELL.

EDITOR'S INTRODUCTION

The value of educational measurement as a means of determining the actual accomplishment of students in given types of academic work, through standardized tests of one kind or another, has been recognized for a number of years. While one does not find as many controversial articles with reference to the value or lack of value of educational measurement as he did a few years ago, the number of school systems making a systematic use of various types of tests is steadily increasing. For years the total annual sale of standardized tests has been enormous, estimates varying from thirty to forty million as the number of copies of such tests sold yearly. However, during the earlier years of the use of various standardized tests, they were confined largely to the fundamental subjects of the elementary grades. For many obvious reasons, the development of suitable types of educational measurement for the secondary grades and for the college has been slow. There are many limitations in the successful construction of standardized tests dealing with subjects of complicated character, and it is altogether probable that there never can be as great reliability in tests in many advanced subjects as has been developed in connection with the fundamental operations in arithmetic, spelling, penmanship, and even such subjects as geography and reading in the elementary grades. However, despite these limitations, there has been a decreasing depreciation of the great value of a systematic use of tests in high school, and a large amount of effort has gone into the formulation of all kinds of tests suitable for use in junior and senior high schools.

This volume has been prepared because of a keen realization on the part of the author of a need for a more adequate guide for high school teachers. The very fact that so many tests have been placed upon the market produces in the mind of the average teacher of any high school a very real sense of bewilderment. This book, with its brief and clear statements concerning the

character and purpose of large numbers of tests in the various high school subjects, should become an invaluable manual for the practical guidance of teachers. It is quite evident that the school system which makes a free and intelligent use of measurement from both the diagnostic and the prognostic point of view is bound to be carrying on a much more successful type of teaching than the school system which ignores almost completely the existence of these tests and their very genuine significance in education. The increasing tendency in our larger high schools toward the organization of classes with large numbers of pupils increases the necessity for a systematic use of tests designed to detect the specific weakness of the individual pupil. Given on the part of the teacher an intelligent grasp of the character of the difficulties met by the pupil, she is enabled, even though she has a large class, to modify her work in the light of this knowledge so that the individual can secure far better value from the instruction, and more successfully complete the specific course.

Just as in warfare every new invention leading to more effective offense is promptly met by a corresponding invention looking toward an effective defense against the new danger, so the increasing necessity for the individual teacher to instruct large numbers of pupils carries with it the necessity for equally energetic measures to prevent the submergence of the individual in the mass and thus to offset the danger of lessening efficiency in the case of individual pupils. It seems that, among the various types of measurement described in this volume, almost any intelligent teacher can select means by which not only her general efficiency as a teacher may be improved, but also her ability to assist the individual who otherwise might be doing unsatisfactory work through a failure on the part of a teacher to realize the nature of the deficiencies.

This volume is submitted to the public with the hope that it will meet a very real need for teachers, not merely as a textbook to be used in professional courses in training schools and colleges, but as a handbook for the teacher in her actual work in the school-room.

CHARLES E. CHADSEY.

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APPENDIX A

ADDRESSES OF PUBLISHERS OF TESTS

- American Book Company, 88 Lexington Ave., New York City; 2 North Forsyth St., Atlanta; 63 Summer St., Boston; 330 East Twenty-second St., Chicago; 300 Pike St., Cincinnati.
- American Physical Education Association, Springfield, Massachusetts.
- A. S. Barnes and Company, 67 West Forty-fourth St., New York City.
- Bruce Publishing Company, 354 Milwaukee St., Milwaukee.
- Bureau of Administrative Research, University of Cincinnati, Cincinnati.
- Bureau of Educational Measurements and Standards, Kansas State Teachers College, Emporia, Kansas.
- Bureau of Educational Research, University of North Carolina, Chapel Hill, North Carolina.
- Bureau of Educational Research, Northern Normal and Industrial School, Aberdeen, South Dakota.
- Bureau of Educational Research and Service, University of Iowa, Iowa City, Iowa.
- Bureau of Publications, Teachers College, Columbia University, New York City.
- Bureau of Tests and Measurements, Department of Education, University of Virginia, University, Virginia.
- Bureau of Vocational Guidance, 1 Lawrence Hall, Harvard University, Cambridge, Massachusetts.
- Catholic Education Press, 1326 Quincy St., Brookland Station, Washington, D. C.
- Center for Psychological Service, 2024 G. St., N.W., Washington, D. C.
- University of Chicago Press, 5750 Ellis Ave., Chicago.
- College Book Company, Columbus, Ohio.
- Columbia Graphophone Company, Woolworth Building, New York City.
- Eau Claire Book and Stationery Company, Eau Claire, Wisconsin.
- Educational and Personnel Publishing Company, Washington, D. C.
- Ginn and Company, 15 Ashburton Place, Boston; 95 Luckie St., Atlanta; 2301 Prairie Ave., Chicago; 199 East Gay St., Columbus, Ohio; 1913 Bryan St., Dallas; 70 Fifth Ave., New York City; 45 Second St., San Francisco.
- Gregg Publishing Company, 20 West Forty-seventh St., New York City; Statler Building, Boston; 2500 Prairie Ave., Chicago; Phelan Building, San Francisco; 57 Bloor Street West, Toronto.
- Harlow Publishing Company, Oklahoma City, Oklahoma.
- D. C. Heath and Company, 231-245 West Thirty-ninth St., New York City;

- 29 Pryor St., N.E., Atlanta; 285 Columbus Ave., Boston; 1815 Prairie Ave., Chicago; 1911 Bryan St., Dallas; 182 Second St., San Francisco.
- Henry Holt and Company, 1 Park Ave., New York City; 6 Park St., Boston; 2626 Prairie Ave., Chicago; 149 New Montgomery St., San Francisco.
- Houghton Mifflin Company, 2 Park St., Boston; 2500 Prairie Ave., Chicago; 1909 Bryan St., Dallas; 386 Fourth Ave., New York City; 612 Howard St., San Francisco.
- Indiana University Book Store, Bloomington, Indiana.
- Johns Hopkins Press, Baltimore, Maryland.
- Joliet Township High School, Joliet, Illinois.
- Kenyon Press Publishing Company, Wauwatosa, Wisconsin.
- La Fayette Printing Company, La Fayette, Indiana.
- Lakeland Publishing Company, 217 North Mill St., Madison, Wisconsin.
- J. B. Lippincott Company, 227 South Sixth St., Philadelphia; 2244 Calumet Ave., Chicago.
- Lyons and Carnahan, 221 East Twentieth St., Chicago.
- The Macmillan Company, 60 Fifth Ave., New York City; 500 Spring St., N.W., Atlanta; 240 Newbury St., Boston; 2459 Prairie Ave., Chicago; Ross Ave. and Akard St., Dallas; 350 Mission St., San Francisco.
- Manual Arts Press, Peoria, Illinois.
- National Council of Teachers of English, 506 West Sixty-ninth St., Chicago.
- National Publishing Society, Mountain Lake Park, Maryland.
- Palmer Company, 120 Boylston St., Boston.
- Playground and Recreation Association of America, 315 Fourth Ave., New York City.
- H. C. Pryor, Kansas State Teachers College, Pittsburg, Kansas.
- Public School Publishing Company, Bloomington, Illinois.
- Publishing Department, Russell Sage Foundation, 130 East Twenty-second St., New York City.
- Research Service Company, 7219 Beverly Boulevard, Los Angeles.
- Rural Education Department, Pennsylvania State College, State College, Pennsylvania.
- Safety Electric Heater Company, 761 Fourth Ave., Faribault, Minnesota.
- Scott, Foresman and Company, 5 West Nineteenth St., New York City; 29 Pryor St., N.E., Atlanta; 623 South Wabash Ave., Chicago; 2013 Jackson Place, Dallas.
- Smith, Hammond and Company, Atlanta.
- Southern Publishing Company, Santa Fe Building, Dallas.
- South-Western Publishing Company, 542 South Dearborn St., Chicago; 1-3 Third St., Cincinnati.
- Stanford University Press, Stanford University, California.
- D. Starch, 1374 Massachusetts Ave., Cambridge, Massachusetts.
- C. H. Stoelting Company, 424 North Homan Ave., Chicago.
- University Printing Company, 315 Fourteenth Ave., S.E., Minneapolis.
- University Publishing Company, 1126 Q. St., Lincoln, Nebraska; 2126 Prairie Ave., Chicago; 2013 Jackson St., Dallas; 239 Fourth Ave., New York City.

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C. W. Waddell, 855 North Vermont Ave., Los Angeles.

Warwick and York, 10 East Centre St., Baltimore.

John C. Winston Company, 622-33 South Wabash Ave., Chicago.

Women's Division, National Amateur Athletic Federation of America, 370 Seventh Ave., New York City.

World Book Company, Yonkers-on-Hudson, New York; 110 West Peachtree St., Atlanta; 14 Beacon St., Boston; 2126 Prairie Ave., Chicago; 1307 Pacific Ave., Dallas; Portland, Oregon; 149 New Montgomery St., San Francisco; Manila, P. I.

APPENDIX B

GENERAL BIBLIOGRAPHY

In addition to the bibliographies at the ends of the chapters dealing with special topics or fields, it seems well to include also a general bibliography on testing. The references given below include practically all books and more or less similar publications dealing with testing in general. Those devoted to a particular phase of it, such as intelligence testing, testing in a particular subject or to particular uses of tests and their results, such as for classifying pupils, prognosis, and so forth, are not included.

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