

**THE OUTLINES OF
EDUCATIONAL PSYCHOLOGY,
AN INTRODUCTION TO
THE SCIENCE OF EDUCATION**

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The outlines of educational psychology, an introduction to the science of education by William Henry Pyle

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WILLIAM HENRY PYLE

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THE OUTLINES OF EDUCATIONAL
PSYCHOLOGY

THE OUTLINES OF
Educational Psychology

An Introduction to the Science of Education

BY

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PREFACE.

The fact that we have had no general text-book in educational psychology has led to the preparation of this book, which is the outgrowth of the work with my own classes. I have endeavored to select for treatment those facts and principles of psychology, fairly well established, that have evident and direct bearing upon the problems of teaching. The time is at hand when every step in educational procedure must have scientific justification. This can come in the main from only one source,—the crucial test of experimental determination. If this volume contributes, in some small measure, toward the end of making education more scientific, I shall feel that its publication will be justified. It has been my aim to be careful and conservative, to keep within the warrant of established fact. However, I realize that nearly every page shows the need of more facts, more data. Experimental psychology is a thing of only yesterday; educational psychology is a new-born infant of today. But it is an infant of great promise. The army of trained investigators that is attacking the myriad problems of the school, will give us, even in a decade, results of great importance to education. But the work must be carefully done.

It is my belief that a text-book should be a mere outline, to be elaborated by teacher and students. The questions and exercises and the references will help toward this elaboration. The questions, for the most part, are selected

from those asked by my students when the matter of this book was presented to them in class. The references are to such English sources as I have found most helpful. They fall into two classes: (1) parallel systematic treatises and (2) the original reports of experimental work. In neither case, however, are the references complete. They are intended only on the one hand to refer the student to other, and often more extended, treatments of the same subjects, and on the other, to give the beginning student some idea of the nature of the investigations on which the statements of the text are based.

My indebtedness, direct and indirect, is great. Directly, I am indebted most of all, to Dr. W. L. Bryan, president of Indiana University, my first teacher in psychology; to Dr. E. B. Titchener, Sage professor of psychology in the graduate school of Cornell University, in whose laboratory I learned something of scientific method; and to Dr. G. M. Whipple of Cornell, who has shown the possibilities of applying this method to the solution of school-room problems.

Indirectly, my greatest debt is to President G. Stanley Hall and the late Professor James. My thanks are also due to President A. Ross Hill and Dean W. W. Charters of the University of Missouri, and to my brother, J. O. Pyle, of Chicago, who have read most of the manuscript and given valuable suggestions.

W. H. P.

COLUMBIA, Mo.,

September 1, 1911.

THE OUTLINES OF EDUCATIONAL PSYCHOLOGY

CHAPTER I. 22096 INTRODUCTION.

The educational situation.—The educational practice of the past has not been based on science as medical practice or good farming is now based on scientific principles. This, of course, does not mean that there has never been any good teaching. Long before there was a science of medicine many good remedies were discovered empirically, although little was known concerning the principles of drugs or the nature of their physiological action, nor was anything definite known concerning the nature and causes of disease. Now, however, medical practice has a scientific basis. Much the same can be said of farming. For thousands of years man has been tilling the soil, and by the slow trial and success method has learned many good practices, but he has not understood the nature of the forces with which he has dealt. He has not known what caused success or failure. The farmer of today can have sufficient scientific facts to make his procedure entirely intelligent. Although he can never have complete control of the conditions of his work, he can understand these