TYPES OF ELEMENTARY TEACHING AND LEARNING

PARKER

TYPES OF ELEMENTARY TEACHING AND LEARNING

INCLUDING PRACTICAL TECHNIQUE AND SCIENTIFIC EVIDENCE

BY

SAMUEL CHESTER PARKER

PROFESSOR OF EDUCATIONAL METHODS IN THE UNIVERSITY OF CHICAGO



GINN AND COMPANY

BOSTON · NEW YORK · CHICAGO · LONDON ATLANTA · DALLAS · COLUMBUS · SAN FRANCISCO

COPYRIGHT, 1923, BY SAMUEL CHESTER PARKER ALL RIGHTS RESERVED

623.7



HISTORICAL IDEAS MADE CLEAR AND VIVID BY A DRAMATIC ASSEMBLY PROJECT See discussion on page 9

TO
THE SISTER AND BROTHERS
WHOSE SACRIFICES
SECURED ME A HIGHER EDUCATION

PREFACE

Origin.—This textbook is the outcome of eighteen years' experience in conducting courses dealing with methods of teaching in elementary schools—five years in the State Normal College at Oxford, Ohio, and the remainder in the School of Education of The University of Chicago.

A practical volume.—The book contains many examples of methods and devices actually used in progressive elementary schools for training pupils in various types of learning, such as handwriting, spelling, reading, arithmetic, problem-solving, expression, enjoyment, etc. These examples of teaching are frequently so refined in technique as to interest and aid very experienced teachers; yet they are described in language simple enough for the inexperienced normal-school or college student to comprehend and appreciate.

Supported by scientific evidence.—In addition to this abundant practical material, the book contains much of the scientific evidence that has been developed to justify and interpret the progressive methods set forth. Thus it joins practical technique and scientific evidence—the only safe combination for organizing and propagating valid improved methods of teaching.

Scientific indebtedness.—The author is greatly indebted to his early studies under Professors C. H. Judd, E. L. Thorndike, and John Dewey, and to years of reading of the works of William James, for many of the general points of view and specific doctrines found in the text. He has been aided also by frequent discussions with his colleagues in the School of Education.

From the scientific monograph literature, such as the Year-books of the National Society for the Study of Education, considerable help has been obtained on special problems.

Practical indebtedness.—From the teaching in the Elementary School of The University of Chicago, much of the practical material in the text has been derived. Sometimes large sections of a chapter have been written around observations of skilled teachers in this school. In the body of the text I have everywhere tried to assign appropriate credit to the particular teacher whose skilled technique is being described. Another generous source from which I have derived practical examples is the teaching described by some of the experienced teachers in my summer classes. To all these coöperating contributors I am very grateful for the help rendered.

Illustrations.—Photographs and other materials for pictures have been kindly furnished by many persons. In this connection I am especially indebted to Principal Harry O. Gillet, of the University of Chicago Elementary School, for numerous excellent photographs of its activities which were taken in 1916, when the university celebrated its twenty-fifth anniversary.

Relation to the author's "General Methods."—This volume supplements the author's "General Methods of Teaching in Elementary Schools," published in 1919. Together the two volumes cover most of the phases of elementary school-teaching commonly discussed in courses on methods of teaching. There are, however, certain general principles of organizing instruction which have been omitted and which I may find time to discuss at some future date.

SAMUEL CHESTER PARKER

KEV TO BIBLIOGRAPHICAL REFERENCES

The books from which quotations are made in the text are included in the bibliographies which are printed at the ends of the chapters. The source of each quotation is indicated (usually at its end) by two figures in parenthesis. The first figure refers to the book by its number in the bibliography at the end of the chapter, and the second figure refers to the page. Thus, (4:76) means page 76 in the fourth book in the chapter bibliography. This system has been adopted in order that the instructor or student may verify or follow up any quotation without the ordinary reader's being distracted by numerous footnote references which are unimportant in his reading.

CONTENTS

In the longer chapters the major divisions are designated by Roman numerals and are referred to in the text as "sections."

CHAPTER I		PAGE
Introducing the Varied Types of Teaching and L	EARNI	
PART I. FOUR ELEMENTARY SKILL	S	
CHAPTER II		
Introduction to Part I	•	. 11
CHAPTER III		
HANDWRITING AND OTHER MOTOR SKILLS		. 13
I. Teaching Handwriting		. 14
A. Technique of Teaching		14
B. Laboratory Experiments upon Handwriting .		. 21
C. Scales to measure Handwriting	iscussi	. 30
of Handwriting III. Construction, Gymnastics, and Other Forms of Mo	 tor Sl	. 40 kill 43
CHAPTER IV		
LEARNING TO SPELL FOUR THOUSAND WORDS		. 52
I. What Words to Teach		• 53
II. How to arrange the Selected Words		• 54
III. How to conduct Spelling Lessons		. 57
IV. How to measure the Results of Spelling Instruction		. 66
V. The Science and the Art of Teaching		. 69
CHAPTER V		
BEGINNING READING		. 72
I. General Description of First-Grade Activities,	includ	•
Reading	• •	. 73

	PAGE
II. Pre-Primer Blackboard-Reading and Chart-Reading	77
A. Sample Lessons	77
B. Principles of Pre-Primer Blackboard-Reading and Chart-	
Reading	92
III. Beginning Book-Reading	103
A. Sample Lessons	103
B. Principles of Beginning Book-Reading	107
IV. Independent Recognition of New Words; Phonetic Analysis	112
A. Sample LessonsB. Principles of teaching Independent Recognition of New	112
	* * *
Words	117
nique	120
CHAPTER VI	
SCIENTIFIC INVESTIGATIONS OF READING	125
I. Laboratory Studies of Word Recognition and of Eye Move-	
ments	126
II. Tests and Scales for measuring Oral and Silent Reading .	131
III. Conclusions from Scientific Investigations	135
CHAPTER VII	
Skill in Arithmetical Calculation	145
I. Determining the Important Arithmetical Skills from Social	
Needs	146
II. Adapting Problems to Pupil Maturity	148
III. Giving Pupils Clear Arithmetical Ideas	151
IV. Using Scientific Drill Systems	156
V. Measuring the Arithmetical Skills Attained	163
VI. Selecting a Good Arithmetic Textbook	167
PART II. FOUR THOUGHTFUL PROCESSES	
CHAPTER VIII	
Introduction to Part II	171
CHAPTER IX	
Understanding Social Life	173
Acquiring Sympathetic Insight into Contemporary Civi-	
LIZATION	173

	PAGE
A LIBERAL ELEMENTARY EDUCATION	173
I. What Ideas give Insight into Contemporary Life?	174
II. What School Subjects give Ideas of Social Life?	179
III. Progressive Growth of Pupils' Social Ideas through Study of	17.9
Community Life and History	τġ.
IV. Evaluation of Methods and Devices used in studying Com-	183
By the second of the secon	
A. Arousing Instinctive Tendencies, Interests, or Activities	211
B. Providing Vivid Experiences .	216
C. Stimulating Attentive Reflection upon Experiences	222
V. Devices for securing Social Insight through Geography, Fic-	229
tion, Arithmetic, and Applied Science	
A. Geographic Devices for giving Insight into Contempo-	233
rary Civilization	233
B. Reading Fiction to develop Social Insight	244
C. Devices for Social Insight through Arithmetic	249
D. Attaining Social Insight through Applied Science	250
VI. What is Sympathetic Insight into Contemporary Civilization?	252
CHAPTER X	
PROBLEM-SOLVING, OR PRACTICE IN THINKING	263
I. Problems of Everyday Life	265
II. Actual Lessons illustrating Problem-Solving in School . A. Seventh Grade: Should the United States produce its	279
0 3	
Own Sugar?	279
	-0.6
Cardboard Store	286
C. Second Grade: How to dress an Arab Doll	293
D. Fifth Grade: Standardized Short Geography Problems	
on the British Isles	300
III. How Skillful Problem-Solvers Think	307
IV. Rules for training Pupils in Reflective Problem-Solving	314
CHAPTER XI	
Skillful Silent Reading	332
I. Social Opportunities and Need for Skillful Silent Reading	334
II, What a Pupil needs in acquiring Skill in Silent Reading .	340
III. Practice Exercises in Silent Reading	351
A. Sample Lessons from Second and Seventh Grades	352

xii TYPES OF TEACHING AND LEARNING

		PAGE
B. Systematic Description of Devices		367
1. Developing Interest		367
2. Giving ideas and meanings for interpreting readir		370
3. Building up the pupil's automatic reading vocabu		371
4. Practice in cursory and in reflective, studious rea	ding	373
a. Exercises in cursory, unreflective reading .		373
b. Exercises in reflective, studious reading		378
CHAPTER XII		
PRACTICE IN COMMUNICATING IDEAS		396
I. History and Principles of teaching Composition: from		
Written to Oral		398
II. Practice in Oral Communication		407
III. Practice in Written Communication		424
IV. Varied Oral and Written Practice with a Rich Social 7	Copic	439
V. Correct Grammatical Practice; Scientific Outlines .		448
VI. Measuring the Results of Practice in Composition .		453
VII. Learning to communicate Ideas through Drawings.		457
PART III. RECREATIONAL AND MORAL BEHA CHAPTER XIII Introduction to Part III		465
CHAPTER XIV		
FORMING HABITS OF HARMLESS ENJOYMENT		466
Increasing the Harmless Enjoyment of Leisure.		466
I. Social Values of Harmless Enjoyment		467
II. General Precautions for the Teacher		470
III. General View of the School's Recreational Opportunities	i .	475
IV. Details concerning Various Lines of Recreation		477
A. Reading for Fun		477
B. Music for Recreation		491
C. Plays and Games		492
D. Dancing		494
E. Contemplation of Beauty		494
F. Curious Observation of Nature		496
G. Contemplation of Human Nature and Society	•	498

	22111
CHAPTER XV	PAGE
CIVIC-MORAL IDEALS AND EFFICIENCY	502
I. Examples of Civic-Moral Training	503
A. Examples of Training through Actual Behavior	503
B. Examples of Civic-Moral Instruction through Discussions	524
II. Psychological Factors in the Development of Character .	533
A. The Instinctive Elements in Character	534
B. The Acquired Components of Civic-Moral Character	543
C. Special Application to the Feeble-minded	552
III. From Religious-Moral to Civic-Moral Training in Public	00
Schools	562
A. Religious-Moral Training	562
B. Civic-Moral Training	565
INDEX'	577

CONTENTS

viii

ILLUSTRATIONS

	PAGE
Historical Ideas made Clear and Vivid by a Dramatic Assembly	
Project Frontis	piece
Problem-Solving typified by Rodin's Famous Statue "The	
Thinker"	4
Harmless Enjoyment of Leisure typified by "A Reading from	
Homer"	5
Religious-Moral Service typified by Michelangelo's "Moses" .	6
Civic-Moral Service typified by Saint Gaudens's "Lincoln" .	6
Curves practiced in Handwriting	15
How Two Different Children wrote the Word "Seed"	17
Sample Handwriting Exercises from an Experimental System .	20
Judd Tracer for analyzing Handwriting Movements	22
Nutt's Scale for scoring Arm-Movement Records from the	
Judd Tracer	24
Motion-Picture Film of a Boy's Hand engaged in Writing	25
Projecting a Motion-Picture Film, One Exposure at a Time,	
and Drawing Same	27
Portions of the Ayres Handwriting Scale	32
Humorous Example of a Child's Handwriting	33
Grade Standards for Pupils' Handwriting	34
Informal Kindergarten Constructions in a Sand-pan	44
Can a Girl drive a Nail?	45
Boys modeling in Clay	46
Boy demonstrating the Use of a Potter's Wheel	48
Mural Decoration for a First-Grade Room	78
"Little Miss Muffet" used to decorate the Walls of a First-	
Grade Room	80
Judd's Apparatus for photographing Eye Movements	127
Silent-Reading Pauses by a Rapid Reader in the Fourth Grade	128
Silent-Reading Pauses by a Poor Reader in the Fifth Grade .	129
Silent-Reading Pauses by a Good Reader in the Seventh Grade	136
Oral-Reading Pauses by a Good Reader in the Seventh Grade	137
Diagram used in Arithmetic Lesson	153
Facsimile of a Page from One Volume of the Survey of the	
Gary Schools	166
"This is the Way we wash our Clothes, wash our Clothes," etc.	184
Community of Houses constructed as a Kindergarten Project.	186

ILLUSTRATIONS	xv
	PAGI
Children weaving on Small Looms	191
Frontier Fort constructed in Sand-pan	195
Blackboard Drawing used as a Means of clarifying Ideas of	
Social Devices	197
Social Devices	201
Saxon Village modeled in the Sand-pan	201
Boy Warrior in a Play of Medieval Life	202
Medieval Town and Castle modeled in Sand-pan as a Historical	
Project	204
Pupils in the School's Print Shop	248
Miniature Airplane made by Seventh-Grade Pupils in The	
University of Chicago Elementary School	248
Electric Bell made by a Seventh-Grade Pupil in The University	•
of Chicago Elementary School	240
Children raising Plants in a Hotbed	253
Primary Children solving Mechanical Construction Problems	260
Upper-Grade Boys working on a Science Problem	273
Construction Project of Arab Settlement	204
Puppet-play of Arab Life involving much Problem-Solving by	
the Puples	295
Samples of Children's Handwriting	355
Some Pupils' Reports	417
Illustrations of Types of Drawings	457
Pupils' "Graphic Vocabulary" being enriched by Ability to	421
sketch Viking Ships	459
Making drawings for Historical Assembly Project	460
Telling the Assembled School about the Historical Drawings	
Harmless Enjoyment at the Kindergarten Age	493
"Atalanta's Race"	496
"Atalanta's Race"	
What Civic-Moral Training does School Gardening Offer?	497 523
Nine-Year-Old Betty's Disdain for Powder Puffs, Vanity	343
•	
Boxes, etc	231
Normal Distribution Curve for Statures	
TANIHIMI TAISHINGHOH CHIAC I AF BEWEIGHT	346

Textbooks

TYPES OF ELEMENTARY TEACHING AND LEARNING

CHAPTER I

INTRODUCING THE VARIED TYPES OF TEACHING AND LEARNING

Practical technique plus scientific evidence.—This book is designed to assist teachers in directing the various types of learning that pupils carry on in elementary schools. Hence it contains many practical examples of actual teaching described in detail. In most cases the scientific evidence justifying these practices is also presented.

Familiar and unfamiliar types.—Some of the types of teaching and learning discussed here are familiar to every beginning teacher, while others may be comparatively strange to those who have not thought much about recent improvements in teaching. Among the more familiar types are learning handwriting, spelling, beginning reading, and arithmetical calculation. The less familiar types include learning to understand social life and learning to be skillful in problem-solving, in silent reading, and in communicating ideas to an audience. Another unfamiliar type is learning how to increase the harmless enjoyment of leisure. Finally, learning to behave morally is familiar to many persons in its religious aspects but comparatively unfamiliar in the civic aspects which our public schools are now called upon to emphasize.

Contrasting types. Romance versus science.—Between some of these types of teaching and learning there are such great contrasts that a teacher may be quite strong and efficient and sympathetic in one of them, and at the same time be weak

and inefficient and unsympathetic in another. Perhaps the best example of such a contrast is found in the antagonism between the artistic type of temperament, which is important in the harmless enjoyment of literature, and the cold-blooded, scientific type, which is strong in problem-solving. Frequently poets with extremely asthetic temperaments have rebelled against the scientific thinkers and expressed their antagonism in very strong language, as evidenced in the following stanzas by Poe, in the first of which he expresses his love for romance, for the contemplative play of the artist, while in the other he scolds the scientist. If you are not fond of poetry, try reading these verses aloud to get their effect, remembering that "romance" is accented on the second syllable (ro mance') and that "paroquet" may be pronounced par'o kay for riming purposes.

ROMANCE

Romance, who loves to nod and sing, With drowsy head and folded wing. Among the green leaves as they shake Far down within some shadowy lake, To me a painted paroquet

Hath been—a most familiar bird—Taught me my alphabet to say—

To lisp my very earliest word

While in the wildwood I did lie,
A child—with a most knowing eye.

SONNET—TO SCIENCE

Science! true daughter of Old Time thou art!
Who alterest all things with thy peering eyes.
Why preyest thou thus upon the poet's heart,
Vulture, whose wings are dull realities?
How should he love thee? or how deem thee wise,
Who wouldst not leave him in his wandering
To seek for treasure in the jewelled skies,
Albeit he soared with an undaunted wing?