

Contents

Tribute.....	v
Preface.....	xi
Acknowledgments	xiii
1 An Agenda	1
Choices Among Alternatives	2
A Theory of Teaching Rather than Instruction	2
A Theory of Teaching That is Both Descriptive and Prescriptive	3
A Conception of Teaching for Both Cognitive and Affective Objectives of Education	4
A Broadly Valid, Rather than Specifically Valid, Theory	4
A Theory of Teaching Actions and Teacher Characteristics.....	6
A Theory of Classroom Teaching Rather Than Any of the Challenges to Classroom Teaching.....	6
An Overview of Chapters 2–9	7
Chapter 2.....	7
Chapter 3.....	7
Chapter 4.....	8
Chapter 5.....	8
Chapter 6.....	9
Chapter 7.....	9
Chapter 8.....	9
Chapter 9.....	10
2 The Desirability and Possibility of a Theory of Teaching	11
Experimental Main Effects	13
A Major Review of Experimental Studies	13
Evaluating the Magnitude of Main Effects	14
But, Is Human Teaching Moribund?.....	20
Conceptions of Theory.....	21
Must Scientific Research Be Theory-Driven?	23

The Prior-Theory-is-Indispensable Position	24
The Prior -Theory-is -Not-Indispensable Position.....	24
Implicit Guiding Theories.....	25
Philosophers of Science on Scientific Method.....	26
Serendipity in the History of Science	27
Some History of Process-Outcome Research on Teaching.....	28
Karl Popper's Resolution of the Issue.....	30
An Empirical Approach to Controversies About Scientific Method	30
The Faust-Meehl Proposal	31
Empirical Consensus in Defining Science	31
Theory as the Outcome of Research	32
The Neglect of Theory in Educational Research	32
Calls for Theory in Educational Research	33
Carroll's Model of School Learning	34
Questionings of the Value of Theory	35
B. F. Skinner's Position on Theory	35
Levels of Theory	36
Positions Against Theory	37
Knowledge Outcome and Knowledge Use	39
For Knowledge Producers.....	39
For Knowledge Users.....	40
3 The Evolution of a Paradigm for the Study of Teaching	41
Evolution of the Paradigm	42
The Process-Achievement Paradigm	42
The Criterion-of-Teacher-Effectiveness Paradigm	42
Context Variables	43
The Teacher's-Thought-Processes Category.....	44
The Student's Thought Processes Category.....	46
The Variables in the Categories	47
The Presage Category	47
The Context Category	48
The Teacher's Thought Processes Category	48
The Variables in the Process ↔ Content of Teaching Category	49
The Student's Thought Processes Category.....	50
The Student Achievement Category	50
The Change from "Process" to "Process × Content"	51
On the Process Side	52
On the Content Side	52
Relationships between All Possible Pairs	54
A Paradigm for the Study of Teaching.....	54
Two-way Relationships Between Pairs of Categories.....	55
Ways of Describing the Process of Teaching.....	56
Intra-Category Relationships	58

Contents	xvii
Inter-Category Relationships	58
Multivariate Relationships	58
Instructional alignment	59
4 A Conception of the Process of Teaching.....	61
Models of the Process of Teaching	62
Two Categories of Models	62
Progressive–Discovery–Constructivist Teaching	63
Conventional–Direct–Recitation Teaching	66
Empirical Studies of the Process of Teaching.....	68
A Historical Study.....	69
Observational Studies	69
Similarity of the Bellack Model to Computer-Assisted Instruction Frames	74
The Generalizability of the CDR Model.....	75
CDR Teaching Across Nations	75
CDR Teaching Across Subject Matters	76
The Reader's Memory.....	77
Present Status of the Search for the Prevalent Model of Teaching	77
Reasons for Suspending Judgment	78
Present Conclusion as a Conjecture.....	79
Why the Persistence of CDR Teaching?	79
“Inheritance” of CDR	80
CDRs Apparent Adequacy.....	80
Excessive Demands of Alternatives to CDR.....	81
Weak Effect of Computers in Classrooms	81
Is Progressive Education Still Around?	83
5 A Conception of the Content of Teaching.....	85
The Neglect of Content in Process–Product Research on Teaching	85
The Garrison–Macmillan Critiques	86
Content Variation	88
Instructional Alignment	88
Approaches to Instructional Alignment	89
Instructional Alignment Summarized	91
Methods of Studying Instructional Alignment	91
Categorizations of Content	97
Taxonomies	97
Bloom's Taxonomy	97
The Anderson–Krathwohl Taxonomy for Learning, Teaching, and Assessment.....	98
Types of Knowledge	99

6 Conceptions of Students' Cognitive Capabilities and Motivation.....	101
Two Components of Cognitive Capabilities	101
Intelligence.....	101
Prior Knowledge	103
Adjusting Teaching to Students' Cognitive Capabilities	103
Early Cognitive Capabilities	104
Cognitive Capabilities and Teaching Processes	104
Simplifying	105
Reducing Cognitive Load	106
A Clinical Approach	107
Tutoring.....	108
Teaching with Multiple Intelligences.....	108
Awakening the Intelligences	108
Amplifying the Intelligences.....	109
Teaching with the Intelligences	109
<i>Transferring the intelligences</i>	109
Musical Intelligence.....	109
Soliciting for Multiple Intelligences	110
Responding and Reacting for Multiple Intelligences.....	110
A Conception of Student Motivation	110
Behavioristic Approaches	111
Cognitive Approaches.....	112
7 A Conception of Classroom Management	113
Poverty	113
Poverty and the Superintendency.....	116
Classroom Management in General.....	116
Instructional Time	117
Studying Students' Thought Processes	118
Categories of Instructional Time	119
Classroom Management in Elementary Schools	120
Classroom Management in Secondary Schools.....	120
Avoiding Biases toward Students.....	121
8 Integrating the Conceptions.....	123
Sub-Theories	123
An Illustrative Theory Consisting of Sub-Theories*	124
Scheme of Presentation of Sub-Theories	125
Sub-Theories of the Process of Teaching.....	125
Sub-Theories of Structuring.....	125
Functions of Structuring	126
Structuring as Lecturing.....	128



Contents

xix

The Communicability to Teachers of Comprehensibility-Affecting Actions	132
Sub-Theories of Soliciting	134
Sub-Theories of Responding and Reacting.....	140
Sub-Theories of the Content of Teaching	141
Instructional Alignment	141
The Teacher's Choice of Content.....	142
Sub-Theories of Students' Cognitive Capabilities and Motivation	144
A Sub-Theory of Classroom Management	145
Integrating the Sub-Theories.....	146
The Culmination: Using the Theory	148
References.....	151
Author Index.....	165
Subject Index.....	171

