

Contents

Preface ix

I INTRODUCTION TO COMPETENCY-BASED EDUCATION AND MASTERY

1	Introduction	3
2	Average-Based Education	9
	Widespread Use of Average	9
	Instructional Level Inappropriate for Many Students	13
	Measures Supply Insufficient Information	13
	Averaging Produces Labels	14
3	Competency-Based Education	19
	Program Goals	19
	Planning	20
	Advantages	24
	Potential Implementation Problems	24
4	Domains of Competence	29
	Domains of the “Humane Curriculum”	30
	The Arts of Learning	34
	Conclusion	36

II MASTERY: THEORY AND RESEARCH

5	The Mastery Model	41
	The Mastery Components	41

When Is Mastery Appropriate?	44
Derivation of the Mastery Model	46
6 Mastery Model Implementation: Cognitive Consequences	55
Objective-Referenced Postassessment Performance	57
Norm-Referenced Standardized Achievement Tests	67
Retention	71
Reduction in Extent to Which Cognitive Entry Characteristics Determine Postassessment Performance	72
Conclusion	73
7 Mastery Model Implementation: Affective Consequences	75
Teachers' Perceptions	76
Parents' Perceptions of Curricula Structured according to the Mastery Model	79
Students' Perceptions	80
Affective Consequences of Instructional Conditions Created by Mastery Model Implementation	84
8 Research Relevant to Specific Mastery Model Components	103
Objectives	103
Preassessment	106
Sequencing of Objectives and Instructional Activities	107
Instruction	112
Diagnostic Assessment	122
Prescription	126
Postassessment	134

III PRACTICAL CONCERNS

9 Implementation Examples and Evaluation	143
Competencies	143
Objectives	145
Samples of Curricula Which Implement the Six Mastery Components	147
A Sample Unit in the University of Illinois College of Medicine Curriculum	148
A Sample Multiplication Unit in the Mathematics Learning System (SRA, 1974)	149
Unit Objectives	150
Preassessment	151
Sample Learning Activities (Desired Student Response)	155
Diagnostic Assessment	157
Prescription	159
Postassessment	159
Science Research Associates Assessment Instruments	162
Formative and Summative Mastery Model Curriculum Evaluation	170

10	Problems and Potential	179
	Administrative Problems	179
	Technical Problems	183
	Advantages of Mastery	188
	Bibliography	193
	Index	225