

CONTENTS

ACKNOWLEDGMENTS	XV
INTRODUCTION	1
Who We Are and What We Do	2
How to Use This New Edition	5
Success Stories Since the Missouri Pilot	6
Innovating with Single-Sex Options	8
Moving Forward at the Nexus of Science and Practice	9

PART ONE

HOW BOYS AND GIRLS LEARN DIFFERENTLY

11

I HOW THE BRAIN LEARNS:	
INHERENT DIFFERENCES BETWEEN BOYS AND GIRLS	13
The Wide Spectrum of Gender in the Brain	15
How the Brain Works	17
How Boys' and Girls' Minds Are Different	19
Developmental and Structural Differences	25
Chemical Differences	27
Hormonal Differences	27
Functional Differences	29
Differences in Processing Emotion	31

Why the Brains Are Different	37
A Brief History of Brain Difference	38
The Role of Hormones in the Womb and at Puberty	40
2 HOW BRAIN-BASED DIFFERENCES AFFECT BOYS AND GIRLS	43
Areas of Learning-Style Difference	44
Deductive and Inductive Reasoning	44
Abstract and Concrete Reasoning	45
Use of Language	45
Logic and Evidence	46
The Likelihood of Boredom	46
Use of Space	47
Movement	47
Sensitivity and Group Dynamics	47
Use of Symbolism	49
Use of Learning Teams	49
Learning Differences and the Intelligences	50
Time and Sequence	50
Space and Place	51
Applying the Intelligences to Brain-Based Gender Difference	52
The State of Boys and Girls in Our Schools	54
Advantages for Boys, Challenges for Girls	54
Advantages for Girls, Challenges for Boys	56
Applying Brain-Based Research to Gender Advantage	57
Studies Based on Political Assumptions	64
The Political Search for Workplace Privation	66
Creating the Ultimate Classroom	67

PART TWO
CREATING THE ULTIMATE CLASSROOM FOR
BOTH BOYS AND GIRLS

3	THE ULTIMATE PRESCHOOL AND KINDERGARTEN CLASSROOM	75
	The Foundation of Early Learning: Bonding and Attachment	76
	Handling Children's Emotional Stress	78
	Bonding and Attachment Solutions	80
	Day Care, Preschool, and Kindergarten Community Building	86
	The Case for Preschool	86
	Parents as Teachers	87
	The Parent Education Coordinator	88
	Nutrition and Learning	89
	Carbohydrates, Proteins, and the School Day	89
	Fatty Acids	91
	Dealing with Aggressive Behavior	92
	Aggression Nurturance	95
	Increasing Empathy Nurturance and Verbalization	96
	Discipline Techniques	99
	The Outdoor Classroom	101
	Directing Boys and Girls to Academic Excellence	103
	Teaching Math and Spatial	105
	Language Development	113
	Special Education	117
	Creating a Tribe: Bonding and School-Home Alliances	118
	Use of Psychotropic Medications	119
	The Ultimate Preschool and Kindergarten Classroom for Both Boys and Girls	123
	For the Boys	123
	For the Girls	124
	Tips for Parents	125
4	THE ULTIMATE ELEMENTARY SCHOOL CLASSROOM	127
	Structural Innovations	129
	Use of School Time	130

Class Size, Number of Teachers, and Teacher-to-Student Ratio	133
Using Group Dynamics and Group Work as a Basis of Pedagogy	135
Use of Computers and Other Media in Elementary School	137
The Outdoor Classroom	139
Bonding and Attachment in Elementary Learning	142
Handling Students' Emotional Stress	149
The Role of the Mentor	155
Community Collaboration: Mentors from Outside the School	158
How to Provide Discipline in the Elementary Classroom	160
Learning from Past Mistakes	161
Discipline Techniques After an Offending Act	163
Discipline Techniques to <i>Prevent</i> Undisciplined Behavior	168
Motivation Techniques	170
Character Education	171
CHARACTER ^{plus}	172
Integrating Character Education into the Whole School	173
Dealing with Cruelty, Hazing, and Violence	174
Definition of Terms	175
Zero-Tolerance Policies	176
Innovations for Academic Excellence	180
Innovations for Teaching Language Arts, Especially Reading and Writing	180
Innovations for Teaching Math and Science	184
Standardized Testing	189
Special Education, Learning Disabilities, and Behavioral Disabilities	191
Class Within a Class	193
Fast ForWord	195
Other Spatial Stimulants and Use of Movement	195
The Multisensory Approach to Reading Problems	196
Cooperative and Competitive Learning	196
Sports and Athletics	199

The Ultimate Elementary Classroom for Both Boys and Girls	200
For the Boys	200
For the Girls	201
Tips for Parents	203
5 THE ULTIMATE MIDDLE SCHOOL CLASSROOM	204
Structural Innovations	206
Single-Sex Education	206
Rites of Passage	215
Use of Uniforms	218
Classroom Size and Other Innovations	220
Bonding and Attachment	222
The Early Adolescent’s Drop in Self-Esteem	223
Handling Students’ Emotional Stresses	225
Community Collaboration	231
How to Provide Discipline in the Middle School Classroom	234
Strategies for Providing Discipline	234
Mandatory Sports	238
Character Education	240
Innovations for Teaching Language Arts and Math and Science	243
Innovations for Teaching Language Arts	243
Innovations for Teaching Math and Science	247
Girls and Computer Science	249
Special Education	250
Rethinking Special Education Through the Lens of Gender and the Brain	252
Innovations for Dealing with Behavioral Elements of Special Ed	255
The Underachiever as a Special Ed Category	257
“Mr. Daba”: The Power of Bonding	258
The Ultimate Middle School Classroom for Both Boys and Girls	261
For the Boys	262

For the Girls	263
Tips for Parents	263
6 THE ULTIMATE HIGH SCHOOL CLASSROOM	266
Bonding and Attachment	268
Communication and Conflict Resolution	270
The Art of Mentoring	272
Peer Leadership, Not Peer Pressure	274
Discipline Systems	275
Character Education and Service Projects	277
Structural Innovations	278
Class and School Size	279
Uniforms	280
Time and Time-of-Day Innovations	284
The Innovations Students Are Asking For	286
Counterinnovations	287
Rites of Passage	289
Full Psychosocial Education, Not Just Sex Education	291
Improving Sex Education	292
Gender Education	294
Innovations to Improve Academic Learning	297
Teaching Mathematics, Science, and Technology	298
Technology and Gender	301
Teaching Reading and Literacy	302
Standardized Testing	307
Special Education	310
The Ultimate High School Classroom for Both Boys and Girls	313
For the Boys	313
For the Girls	314
Tips for Parents	315
What High School Students Are Saying: Their Fears	316
EPILOGUE	319
NOTES	323

PARENTS' BOOK STUDY FOR <i>BOYS AND GIRLS LEARN DIFFERENTLY!</i>	333
TEACHERS' BOOK STUDY FOR <i>BOYS AND GIRLS LEARN DIFFERENTLY!</i>	341
THE GURIAN INSTITUTE	349
ABOUT THE AUTHORS	351
INDEX	355

