

Multimedia Learning

THIRD EDITION

Richard E. Mayer

University of California, Santa Barbara



CAMBRIDGE
UNIVERSITY PRESS

Contents

Preface	<i>page</i> ix
About the Author	xvi
Acknowledgments	xvii
Section 1: Introduction to Multimedia Learning	1
1. The Promise of Multimedia Learning	3
2. Science of Learning: Determining How Multimedia Learning Works	29
3. Science of Instruction: Determining What Works in Multimedia Learning	63
4. Science of Assessment: Determining What Was Learned in Multimedia Learning	95
5. Multimedia Principle	117
Section 2: Principles for Reducing Extraneous Processing in Multimedia Learning	139
6. Coherence Principle	143
7. Signaling Principle	166
8. Redundancy Principle	186
9. Spatial Contiguity Principle	207
10. Temporal Contiguity Principle	227
Section 3: Principles for Managing Essential Processing in Multimedia Learning	243
11. Segmenting Principle	247
12. Pre-Training Principle	265
13. Modality Principle	281

Section 4: Principles for Fostering Generative Processing in Multimedia Learning	301
14. Personalization Principle	305
15. Voice Principle	322
16. Image Principle	331
17. Embodiment Principle	341
18. Immersion Principle	357
19. Generative Activity Principle	370
Section 5: Conclusion	395
20. Principles of Multimedia Design	397
Author Index	417
Index	418