

# 14 Principles of Effective Multimedia Learning

## REDUCING EXTRANEOUS PROCESSING

### COHERENCE PRINCIPLE

People learn better when extraneous words, pictures, and sounds are removed.

### SIGNALING PRINCIPLE

People learn better when there are cues showing how images and ideas relate to each other

### REDUNDANCY PRINCIPLE

People learn better from just graphics and narration than they do from graphics, narration and on-screen text.

### SPATIAL CONTIGUITY PRINCIPLE

People learn better when related words and images are near each other on the screen / page.

### TEMPORAL CONTIGUITY PRINCIPLE

People learn better when corresponding words and images are presented simultaneously, not consecutively.



## MANAGING ESSENTIAL PROCESSING

### SEGMENTING PRINCIPLE

People learn better when multimedia lessons are broken up into user-controlled segments rather than contiguous units.

### PRE-TRAINING PRINCIPLE

People learn better from multimedia when they know the main terms and ideas involved.

### MODALITY PRINCIPLE

People learn better from narration than from on-screen text.



## FOSTERING GENERATIVE PROCESSING

### PERSONALIZATION PRINCIPLE

People learn better when the language used is conversational, rather than formal.

### VOICE PRINCIPLE

People learn better from human voices than computer generated voices.

### IMAGE PRINCIPLE

People do NOT learn better from a static image of the instructor.

### EMBODIMENT PRINCIPLE

Seeing the instructor's use of gesture and body language helps learning

### IMMERSION PRINCIPLE

3D environments aren't necessarily better than 2D ones for learning

### GENERATIVE ACTIVITY PRINCIPLE

Learners who are guided in generative activities (summarizing, mapping, drawing, imagining, teaching, etc) during the lesson learn better

