Richard E Mayer

List of Publications by Citations

355 papers	34,150 citations	96 h-index	181 g-index
371 ext. papers	39,541 ext. citations	4.8 avg, IF	8.21 L-index

#	Paper	IF	Citations
355	Nine Ways to Reduce Cognitive Load in Multimedia Learning. *Educational Psychologist*, **2003**, 38, 43-52	6.8	1807
354	Multimedia Learning **2001**,		1602
353	Multimedia Learning **2009**,		1404
352	Should there be a three-strikes rule against pure discovery learning? The case for guided methods of instruction. *American Psychologist*, **2004**, 59, 14-9	9.5	1327
351	Multimedia learning: Are we asking the right questions?. *Educational Psychologist*, **1997**, 32, 1-19	6.8	759
350	Interactive Multimodal Learning Environments. *Educational Psychology Review*, **2007**, 19, 309-326	7.1	711
349	A split-attention effect in multimedia learning: Evidence for dual processing systems in working memory.. *Journal of Educational Psychology*, **1998**, 90, 312-320	5.3	644
348	For whom is a picture worth a thousand words? Extensions of a dual-coding theory of multimedia learning.. *Journal of Educational Psychology*, **1994**, 86, 389-401	5.3	640
347	Cognitive principles of multimedia learning: The role of modality and contiguity.. *Journal of Educational Psychology*, **1999**, 91, 358-368	5.3	634
346	The promise of multimedia learning: using the same instructional design methods across different media. *Learning and Instruction*, **2003**, 13, 125-139	5.8	600
345	When is an illustration worth ten thousand words?. *Journal of Educational Psychology*, **1990**, 82, 715-726	5.3	566
344	The instructive animation: Helping students build connections between words and pictures in multimedia learning.. *Journal of Educational Psychology*, **1992**, 84, 444-452	5.3	512
343	Cognitive constraints on multimedia learning: When presenting more material results in less understanding.. *Journal of Educational Psychology*, **2001**, 93, 187-198	5.3	509
342	The Case for Social Agency in Computer-Based Teaching: Do Students Learn More Deeply When They Interact With Animated Pedagogical Agents?. *Cognition and Instruction*, **2001**, 19, 177-213	2.3	494
341	How seductive details do their damage: A theory of cognitive interest in science learning.. *Journal of Educational Psychology*, **1998**, 90, 414-434	5.3	478
340	Animations need narrations: An experimental test of a dual-coding hypothesis.. *Journal of Educational Psychology*, **1991**, 83, 484-490	5.3	469
339	Models for Understanding. *Review of Educational Research*, **1989**, 59, 43-64	10.3	422

338	Applying the science of learning: evidence-based principles for the design of multimedia instruction. *American Psychologist*, **2008**, 63, 760-9	9.5	399
337	When learning is just a click away: Does simple user interaction foster deeper understanding of multimedia messages?. *Journal of Educational Psychology*, **2001**, 93, 390-397	5.3	396
336	Aids to computer-based multimedia learning. *Learning and Instruction*, **2002**, 12, 107-119	5.8	372
335	Animation as an Aid to Multimedia Learning. *Educational Psychology Review*, **2002**, 14, 87-99	7.1	336
334	Rote Versus Meaningful Learning. *Theory Into Practice*, **2002**, 41, 226-232	1.6	329
333	Adding immersive virtual reality to a science lab simulation causes more presence but less learning. *Learning and Instruction*, **2019**, 60, 225-236	5.8	326
332	Applying the science of learning to medical education. *Medical Education*, **2010**, 44, 543-9	3.7	308
331	Implications of Cognitive Load Theory for Multimedia Learning **2005**, 19-30		302
330	Cognitive Theory of Multimedia Learning43-71		282
329	The role of interest in learning from scientific text and illustrations: On the distinction between emotional interest and cognitive interest.. *Journal of Educational Psychology*, **1997**, 89, 92-102	5.3	273
328	A comparison of three measures of cognitive load: Evidence for separable measures of intrinsic, extraneous, and germane load.. *Journal of Educational Psychology*, **2008**, 100, 223-234	5.3	270
327	When less is more: Meaningful learning from visual and verbal summaries of science textbook lessons.. *Journal of Educational Psychology*, **1996**, 88, 64-73	5.3	268
326	Meta-analysis of action video game impact on perceptual, attentional, and cognitive skills. *Psychological Bulletin*, **2018**, 144, 77-110	19.1	261
325	Clickers in college classrooms: Fostering learning with questioning methods in large lecture classes. *Contemporary Educational Psychology*, **2009**, 34, 51-57	5.6	253
324	Learning science in immersive virtual reality.. *Journal of Educational Psychology*, **2018**, 110, 785-797	5.3	250
323	When static media promote active learning: annotated illustrations versus narrated animations in multimedia instruction. *Journal of Experimental Psychology: Applied*, **2005**, 11, 256-65	1.8	249
322	The Psychology of How Novices Learn Computer Programming. *ACM Computing Surveys*, **1981**, 13, 121-141	13.4	248
321	Systematic thinking fostered by illustrations in scientific text.. *Journal of Educational Psychology*, **1989**, 81, 240-246	5.3	245

320	Can Advance Organizers Influence Meaningful Learning?. *Review of Educational Research*, **1979**, 49, 371-383	6.3	234
319	Signaling as a cognitive guide in multimedia learning.. *Journal of Educational Psychology*, **2001**, 93, 377-389	5.3	229
318	Supporting visual and verbal learning preferences in a second-language multimedia learning environment.. *Journal of Educational Psychology*, **1998**, 90, 25-36	5.3	228
317	Learning science in virtual reality multimedia environments: Role of methods and media.. *Journal of Educational Psychology*, **2002**, 94, 598-610	5.3	222
316	A coherence effect in multimedia learning: The case for minimizing irrelevant sounds in the design of multimedia instructional messages.. *Journal of Educational Psychology*, **2000**, 92, 117-125	5.3	222
315	Eight Ways to Promote Generative Learning. *Educational Psychology Review*, **2016**, 28, 717-741	7.1	215
314	Three Facets of Visual and Verbal Learners: Cognitive Ability, Cognitive Style, and Learning Preference.. *Journal of Educational Psychology*, **2003**, 95, 833-846	5.3	213
313	Multimedia Learning in an Interactive Self-Explaining Environment: What Works in the Design of Agent-Based Microworlds?. *Journal of Educational Psychology*, **2003**, 95, 806-812	5.3	211
312	Role of Guidance, Reflection, and Interactivity in an Agent-Based Multimedia Game.. *Journal of Educational Psychology*, **2005**, 97, 117-128	5.3	211
311	Personalized Messages That Promote Science Learning in Virtual Environments.. *Journal of Educational Psychology*, **2004**, 96, 165-173	5.3	200
310	Learning strategies for making sense out of expository text: The SOI model for guiding three cognitive processes in knowledge construction. *Educational Psychology Review*, **1996**, 8, 357-371	7.1	200
309	Domain specificity of spatial expertise: the case of video game players. *Applied Cognitive Psychology* , **2002**, 16, 97-115	2.1	195
308	Verbal redundancy in multimedia learning: When reading helps listening.. *Journal of Educational Psychology*, **2002**, 94, 156-163	5.3	194
307	Aids to text comprehension. *Educational Psychologist*, **1984**, 19, 30-42	6.8	193
306	An Integrated Model of Text and Picture Comprehension **2005**, 49-70		191
305	Revising the Visualizer-Verbalizer Dimension: Evidence for Two Types of Visualizers. *Cognition and Instruction*, **2002**, 20, 47-77	2.3	190
304	Role of examples in how students learn to categorize statistics word problems.. *Journal of Educational Psychology*, **1996**, 88, 144-161	5.3	188
303	Social cues in multimedia learning: Role of speaker's voice.. *Journal of Educational Psychology*, **2003**, 95, 419-425	5.3	185

302	Students' miscomprehension of relational statements in arithmetic word problems.. *Journal of Educational Psychology*, **1987**, 79, 363-371	5.3	185
301	Fostering social agency in multimedia learning: Examining the impact of an animated agent's voice. *Contemporary Educational Psychology*, **2005**, 30, 117-139	5.6	182
300	Engaging students in active learning: The case for personalized multimedia messages.. *Journal of Educational Psychology*, **2000**, 92, 724-733	5.3	180
299	A generative theory of textbook design: Using annotated illustrations to foster meaningful learning of science text. *Educational Technology Research and Development*, **1995**, 43, 31-41	3.6	178
298	The politeness effect: Pedagogical agents and learning outcomes. *International Journal of Human Computer Studies*, **2008**, 66, 98-112	4.6	176
297	Using multimedia for e-learning. *Journal of Computer Assisted Learning*, **2017**, 33, 403-423	3.8	167
296	Cognitive load in reading a foreign language text with multimedia aids and the influence of verbal and spatial abilities. *Computers in Human Behavior*, **2003**, 19, 221-243	7.7	163
295	Incorporating motivation into multimedia learning. *Learning and Instruction*, **2014**, 29, 171-173	5.8	157
294	The Split-Attention Principle in Multimedia Learning **2005**, 135-146		157
293	Revising the redundancy principle in multimedia learning.. *Journal of Educational Psychology*, **2008**, 100, 380-386	5.3	156
292	Learning by doing versus learning by viewing: Three experimental comparisons of learner-generated versus author-provided graphic organizers.. *Journal of Educational Psychology*, **2007**, 99, 808-820	5.3	156
291	Maximizing constructivist learning from multimedia communications by minimizing cognitive load.. *Journal of Educational Psychology*, **1999**, 91, 638-643	5.3	151
290	Structural differences between outcomes produced by different instructional methods.. *Journal of Educational Psychology*, **1972**, 63, 165-173	5.3	145
289	Unique contributions of eye-tracking research to the study of learning with graphics. *Learning and Instruction*, **2010**, 20, 167-171	5.8	144
288	Five facets of social presence in online distance education. *Computers in Human Behavior*, **2012**, 28, 1738-1747	7.7	137
287	Cognition and instruction: Their historic meeting within educational psychology.. *Journal of Educational Psychology*, **1992**, 84, 405-412	5.3	133
286	A Personalization Effect in Multimedia Learning: Students Learn Better When Words Are in Conversational Style Rather Than Formal Style.. *Journal of Educational Psychology*, **2004**, 96, 389-395	5.3	132
285	Adding Instructional Features That Promote Learning in a Game-Like Environment. *Journal of Educational Computing Research*, **2010**, 42, 241-265	3.8	131

284	Benefits of emotional design in multimedia instruction. *Learning and Instruction*, **2014**, 33, 12-18	5.8	128
283	The relative benefits of learning by teaching and teaching expectancy. *Contemporary Educational Psychology*, **2013**, 38, 281-288	5.6	123
282	An eye movement analysis of the spatial contiguity effect in multimedia learning. *Journal of Experimental Psychology: Applied*, **2012**, 18, 178-91	1.8	123
281	Principles for Reducing Extraneous Processing in Multimedia Learning: Coherence, Signaling, Redundancy, Spatial Contiguity, and Temporal Contiguity Principles279-315		122
280	Generative effects of note-taking during science lectures.. *Journal of Educational Psychology*, **1986**, 78, 34-38	5.3	121
279	An embodiment effect in computer-based learning with animated pedagogical agents. *Journal of Experimental Psychology: Applied*, **2012**, 18, 239-52	1.8	120
278	Narrative games for learning: Testing the discovery and narrative hypotheses.. *Journal of Educational Psychology*, **2012**, 104, 235-249	5.3	119
277	Note taking as a generative activity.. *Journal of Educational Psychology*, **1978**, 70, 514-522	5.3	119
276	Learning as a Generative Activity: Eight Learning Strategies that Promote Understanding **2015**,		119
275	Testing the ATI hypothesis: Should multimedia instruction accommodate verbalizer-visualizer cognitive style?. *Learning and Individual Differences*, **2006**, 16, 321-335	3.1	118
274	A testing effect with multimedia learning.. *Journal of Educational Psychology*, **2009**, 101, 621-629	5.3	115
273	The Self-Explanation Principle in Multimedia Learning **2005**, 271-286		115
272	Signaling techniques that increase the understandability of expository prose.. *Journal of Educational Psychology*, **1983**, 75, 402-412	5.3	115
271	Computer Games for Learning **2014**,		114
270	Teaching students to solve insight problems: Evidence for domain specificity in creativity training. *Creativity Research Journal*, **2004**, 16, 389-398	1.8	112
269	Integrated Model of Text and Picture Comprehension72-103		104
268	Teaching readers about the structure of scientific text.. *Journal of Educational Psychology*, **1988**, 80, 448-456	5.3	104
267	Frequency norms and structural analysis of algebra story problems into families, categories, and templates. *Instructional Science*, **1981**, 10, 135-175	2	104

266	Applying the self-explanation principle to multimedia learning in a computer-based game-like environment. *Computers in Human Behavior*, **2010**, 26, 1246-1252	7.7	103
265	Applying multimedia design principles enhances learning in medical education. *Medical Education*, **2011**, 45, 818-26	3.7	102
264	Implications of Cognitive Load Theory for Multimedia Learning27-42		100
263	Individual differences in cognitive style and strategy predict similarities in the patterns of brain activity between individuals. *NeuroImage*, **2012**, 59, 83-93	7.9	100
262	Comprehension of arithmetic word problems: Evidence from students' eye fixations.. *Journal of Educational Psychology*, **1992**, 84, 76-84	5.3	99
261	Multimedia aids to problem-solving transfer. *International Journal of Educational Research*, **1999**, 31, 611-623	2.1	98
260	Computer Games in Education. *Annual Review of Psychology*, **2019**, 70, 531-549	26.1	98
259	Motivational and cognitive benefits of training in immersive virtual reality based on multiple assessments. *Journal of Computer Assisted Learning*, **2019**, 35, 691-707	3.8	96
258	Increased interestingness of extraneous details in a multimedia science presentation leads to decreased learning. *Journal of Experimental Psychology: Applied*, **2008**, 14, 329-39	1.8	96
257	Pictorial aids for learning by doing in a multimedia geology simulation game.. *Journal of Educational Psychology*, **2002**, 94, 171-185	5.3	93
256	Drawing as a generative activity and drawing as a prognostic activity.. *Journal of Educational Psychology*, **2010**, 102, 872-879	5.3	91
255	Improving Methodological Standards in Behavioral Interventions for Cognitive Enhancement. *Journal of Cognitive Enhancement: Towards the Integration of Theory and Practice*, **2019**, 3, 2-29	2.4	91
254	Principles Based on Social Cues in Multimedia Learning: Personalization, Voice, Image, and Embodiment Principles345-368		88
253	The Multimedia Principle **2005**, 117-134		85
252	Can you repeat that? Qualitative effects of repetition and advance organizers on learning from science prose.. *Journal of Educational Psychology*, **1983**, 75, 40-49	5.3	81
251	The Multimedia Principle174-205		79
250	The Modality Principle in Multimedia Learning **2005**, 147-158		79
249	The Signaling (or Cueing) Principle in Multimedia Learning263-278		77

248	Prior Knowledge Principle in Multimedia Learning **2005**, 325-338		77
247	Role of expectations and explanations in learning by teaching. *Contemporary Educational Psychology*, **2014**, 39, 75-85	5.6	76
246	Multimedia-Supported Metaphors for Meaning Making in Mathematics. *Cognition and Instruction*, **1999**, 17, 215-248	2.3	74
245	Multimedia Learning in Games, Simulations, and Microworlds **2005**, 549-568		71
244	Fostering understanding of multimedia messages through pre-training: Evidence for a two-stage theory of mental model construction.. *Journal of Experimental Psychology: Applied*, **2002**, 8, 147-154	1.8	71
243	Cognitive aids for guiding graph comprehension.. *Journal of Educational Psychology*, **2007**, 99, 640-652	5.3	70
242	Does the modality principle for multimedia learning apply to science classrooms?. *Learning and Instruction*, **2007**, 17, 465-477	5.8	70
241	Brief Note: A Comparison of How Textbooks Teach Mathematical Problem Solving in Japan and the United States. *American Educational Research Journal*, **1995**, 32, 443-460	2.9	70
240	The Self-Explanation Principle in Multimedia Learning413-432		69
239	Comprehension as affected by structure of problem representation. *Memory and Cognition*, **1976**, 4, 249-255		69
238	A Comparison of How Textbooks Teach Mathematical Problem Solving in Japan and the United States. *American Educational Research Journal*, **1995**, 32, 443	2.9	68
237	Principles for Managing Essential Processing in Multimedia Learning: Segmenting, Pre-training, and Modality Principles316-344		67
236	Thirty years of research on online learning. *Applied Cognitive Psychology*, **2019**, 33, 152-159	2.1	67
235	Using erroneous examples to improve mathematics learning with a web-based tutoring system. *Computers in Human Behavior*, **2014**, 36, 401-411	7.7	63
234	A gender matching effect in learning with pedagogical agents in an immersive virtual reality science simulation. *Journal of Computer Assisted Learning*, **2019**, 35, 349-358	3.8	63
233	The Split-Attention Principle in Multimedia Learning206-226		62
232	Effects of observing the instructor draw diagrams on learning from multimedia messages.. *Journal of Educational Psychology*, **2016**, 108, 528-546	5.3	62
231	Drawing pictures during learning from scientific text: testing the generative drawing effect and the prognostic drawing effect. *Contemporary Educational Psychology*, **2014**, 39, 275-286	5.6	59

230	Teaching for understanding in medical classrooms using multimedia design principles. *Medical Education*, **2013**, 47, 388-96	3.7	59
229	Multimedia Learning **2020**,		59
228	Polite web-based intelligent tutors: Can they improve learning in classrooms?. *Computers and Education*, **2011**, 56, 574-584	9.5	58
227	Questioning as an instructional method: Does it affect learning from lectures?. *Applied Cognitive Psychology*, **2009**, 23, 747-759	2.1	57
226	Learning by viewing versus learning by doing: Evidence-based guidelines for principled learning environments. *Performance Improvement*, **2008**, 47, 5-13	0.3	56
225	A Computer-Based Game that Promotes Mathematics Learning More than a Conventional Approach. *International Journal of Game-Based Learning*, **2017**, 7, 36-56	1.3	55
224	The Redundancy Principle in Multimedia Learning247-262		55
223	Teaching students to recognize structural similarities between statistics word problems. *Applied Cognitive Psychology*, **2002**, 16, 325-342	2.1	55
222	Multimedia Learning in Second Language Acquisition **2005**, 467-488		55
221	Getting a handle on learning anatomy with interactive three-dimensional graphics.. *Journal of Educational Psychology*, **2009**, 101, 803-816	5.3	54
220	The Guided Discovery Learning Principle in Multimedia Learning371-390		53
219	Constructing computer-based tutors that are socially sensitive: Politeness in educational software. *International Journal of Human Computer Studies*, **2006**, 64, 36-42	4.6	53
218	An eye movement analysis of highlighting and graphic organizer study aids for learning from expository text. *Computers in Human Behavior*, **2014**, 41, 21-32	7.7	50
217	When graphics improve liking but not learning from online lessons. *Computers in Human Behavior*, **2012**, 28, 1618-1625	7.7	50
216	Five ways to increase the effectiveness of instructional video. *Educational Technology Research and Development*, **2020**, 68, 837-852	3.6	48
215	Five Common but Questionable Principles of Multimedia Learning **2005**, 97-116		47
214	Multimedia Learning with Animated Pedagogical Agents **2005**, 507-524		47
213	The sequencing of instruction and the concept of assimilation-to-schema. *Instructional Science*, **1977**, 6, 369-388	2	46

212	The Expertise Reversal Principle in Multimedia Learning576-597		45
211	Fostering understanding of multimedia messages through pre-training: evidence for a two-stage theory of mental model construction. *Journal of Experimental Psychology: Applied*, **2002**, 8, 147-54	1.8	45
210	Immersive virtual reality increases liking but not learning with a science simulation and generative learning strategies promote learning in immersive virtual reality.. *Journal of Educational Psychology*, **2021**, 113, 719-735	5.3	45
209	The Modality Principle in Multimedia Learning227-246		44
208	Online multimedia learning with mobile devices and desktop computers: An experimental test of Clark□ methods-not-media hypothesis. *Computers in Human Behavior*, **2013**, 29, 639-647	7.7	43
207	It□ all a matter of perspective: Viewing first-person video modeling examples promotes learning of an assembly task.. *Journal of Educational Psychology*, **2017**, 109, 653-665	5.3	43
206	Animated pedagogical agents as aids in multimedia learning: Effects on eye-fixations during learning and learning outcomes.. *Journal of Educational Psychology*, **2018**, 110, 250-268	5.3	43
205	Multimedia Learning in a Second Language: A Cognitive Load Perspective. *Applied Cognitive Psychology*, **2014**, 28, 653-660	2.1	42
204	The Four-Component Instructional Design Model : Multimedia Principles in Environments for Complex Learning **2005**, 71-94		41
203	Animation Principles in Multimedia Learning513-546		40
202	Teaching of subject matter. *Annual Review of Psychology*, **2004**, 55, 715-44	26.1	40
201	Spontaneous spatial strategy use in learning from scientific text. *Contemporary Educational Psychology*, **2017**, 49, 66-79	5.6	39
200	The case for coherence in scientific explanations: quantitative details can hurt qualitative understanding. *Journal of Experimental Psychology: Applied*, **2005**, 11, 13-8	1.8	39
199	Does styles research have useful implications for educational practice?. *Learning and Individual Differences*, **2011**, 21, 319-320	3.1	38
198	Paper-based aids for learning with a computer-based game.. *Journal of Educational Psychology*, **2012**, 104, 1074-1082	5.3	37
197	Techniques That Reduce Extraneous Cognitive Load and Manage Intrinsic Cognitive Load during Multimedia Learning131-152		37
196	Cognitive and affective processes for learning science in immersive virtual reality. *Journal of Computer Assisted Learning*, **2021**, 37, 226-241	3.8	37
195	Qualitatively different cognitive processing during online reading primed by different study activities. *Computers in Human Behavior*, **2014**, 30, 121-130	7.7	36

194	A politeness effect in learning with web-based intelligent tutors. *International Journal of Human Computer Studies*, **2011**, 69, 70-79	4.6	36
193	Learning to Be Literate605-625		35
192	A taxonomy for computer-based assessment of problem solving. *Computers in Human Behavior*, **2002**, 18, 623-632	7.7	35
191	The Guided Discovery Principle in Multimedia Learning **2005**, 215-228		35
190	Multimedia Learning with Hypermedia **2005**, 569-588		34
189	Learning executive function skills by playing focused video games. *Contemporary Educational Psychology*, **2017**, 51, 141-151	5.6	33
188	Multimedia Instruction **2014**, 385-399		33
187	The virtual field trip: Investigating how to optimize immersive virtual learning in climate change education. *British Journal of Educational Technology*, **2020**, 51, 2099-2115	4.3	32
186	What Should Be the Role of Computer Games in Education?. *Policy Insights From the Behavioral and Brain Sciences*, **2016**, 3, 20-26	2.1	32
185	Creating retroactive and proactive interference in multimedia learning. *Applied Cognitive Psychology*, **2007**, 21, 795-809	2.1	32
184	Instructor presence in video lectures: The role of dynamic drawings, eye contact, and instructor visibility.. *Journal of Educational Psychology*, **2019**, 111, 1162-1171	5.3	32
183	An eye-tracking analysis of instructor presence in video lectures. *Computers in Human Behavior*, **2018**, 88, 263-272	7.7	31
182	Adding self-explanation prompts to an educational computer game. *Computers in Human Behavior*, **2014**, 30, 23-28	7.7	31
181	Searching for the role of emotions in e-learning. *Learning and Instruction*, **2020**, 70, 101213	5.8	31
180	An imagination effect in learning from scientific text.. *Journal of Educational Psychology*, **2015**, 107, 47-63	5.3	30
179	Applying the Science of Learning to Multimedia Instruction. *Psychology of Learning and Motivation - Advances in Research and Theory*, **2011**, 77-108	1.4	30
178	Cognitive consequences of making computer-based learning activities more game-like. *Computers in Human Behavior*, **2011**, 27, 2011-2016	7.7	30
177	What Good is Educational Psychology? The Case of Cognition and Instruction. *Educational Psychologist*, **2001**, 36, 83-88	6.8	30

176	Forward transfer of different reading strategies evoked by testlike events in mathematics text.. *Journal of Educational Psychology*, **1975**, 67, 165-169	5.3	30
175	The Four-Component Instructional Design Model: Multimedia Principles in Environments for Complex Learning104-148		29
174	Getting the point: Which kinds of gestures by pedagogical agents improve multimedia learning?. *Journal of Educational Psychology*, **2019**, 111, 1382-1395	5.3	29
173	Equivalence of using a desktop virtual reality science simulation at home and in class. *PLoS ONE*, **2019**, 14, e0214944	3.7	28
172	On the Need for Research Evidence to Guide the Design of Computer Games for Learning. *Educational Psychologist*, **2015**, 50, 349-353	6.8	27
171	Using transparent whiteboards to boost learning from online STEM lectures. *Computers and Education*, **2018**, 120, 146-159	9.5	26
170	The Generative Drawing Principle in Multimedia Learning433-448		26
169	Students' beliefs about mobile devices Vs. desktop computers in South Korea and the United States. *Computers and Education*, **2012**, 59, 1328-1338	9.5	26
168	How Can Brain Research Inform Academic Learning and Instruction?. *Educational Psychology Review* , **2017**, 29, 835-846	7.1	25
167	Affective impact of navigational and signaling aids to e-learning. *Computers in Human Behavior*, **2012**, 28, 473-483	7.7	25
166	Overestimation Bias in Self-reported SAT Scores. *Educational Psychology Review*, **2007**, 19, 443-454	7.1	25
165	Multimedia Learning of Chemistry **2005**, 409-428		25
164	The Worked Examples Principle in Multimedia Learning391-412		24
163	What is Learned in an After-School Computer Club?. *Journal of Educational Computing Research*, **1999**, 20, 223-235	3.8	24
162	Delayed Learning Effects with Erroneous Examples: a Study of Learning Decimals with a Web-Based Tutor. *International Journal of Artificial Intelligence in Education*, **2015**, 25, 520-542	2.5	23
161	The Feedback Principle in Multimedia Learning449-463		23
160	Research-based principles for the design of instructional messages. *Information Design Journal*, **1999**, 1, 7-19		23
159	Forward transfer of different reading strategies evoked by adjunct questions in science text.. *Journal of Educational Psychology*, **1987**, 79, 189-191	5.3	23

158	What have we learned about increasing the meaningfulness of science prose?. *Science Education*, **1983**, 67, 223-237	4.3	23
157	Fostering learning from instructional video in a second language. *Applied Cognitive Psychology*, **2018**, 32, 648-654	2.1	22
156	Role of Interactivity in Learning from Engineering Animations. *Applied Cognitive Psychology*, **2015**, 29, 614-620	2.1	22
155	Ten Common but Questionable Principles of Multimedia Learning151-173		21
154	Benefits of adding anxiety-reducing features to a computer-based multimedia lesson on statistics. *Computers in Human Behavior*, **2016**, 63, 293-303	7.7	20
153	The Learner Control Principle in Multimedia Learning487-512		19
152	Knowledge and processes that predict proficiency in digital literacy. *Reading and Writing*, **2014**, 27, 1567-1583	2.1	18
151	Note-taking fosters generative learning strategies in novices.. *Journal of Educational Psychology*, **1989**, 81, 263-264	5.3	18
150	Young adults learning executive function skills by playing focused video games. *Cognitive Development*, **2019**, 49, 43-50	1.7	18
149	Multimedia Learning of Metacognitive Strategies647-672		17
148	Cognitive Consequences of Participation in a Fifth Dimension After-School Computer Club. *Journal of Educational Computing Research*, **1997**, 16, 353-369	3.8	17
147	Does the Brain Have a Place in Educational Psychology?. *Educational Psychology Review*, **1998**, 10, 389-396	7.1	17
146	Effects of shadowing on prose comprehension and problem solving. *Memory and Cognition*, **1981**, 9, 101-92	2.2	17
145	The Cognitive Aging Principle in Multimedia Learning **2005**, 339-352		16
144	Visual Aids to Learning in a Second Language: Adding Redundant Video to an Audio Lecture. *Applied Cognitive Psychology*, **2015**, 29, 445-454	2.1	15
143	Game over for Tetris as a platform for cognitive skill training. *Contemporary Educational Psychology*, **2018**, 54, 29-41	5.6	15
142	Merlin C. Wittrock's Enduring Contributions to the Science of Learning. *Educational Psychologist*, **2010**, 45, 46-50	6.8	15
141	Where is the learning in mobile technologies for learning?. *Contemporary Educational Psychology*, **2020**, 60, 101824	5.6	15

140	Evidence-Based Principles for How to Design Effective Instructional Videos. *Journal of Applied Research in Memory and Cognition*, **2021**, 10, 229-240	2.3	15
139	Recognizing the emotional state of human and virtual instructors. *Computers in Human Behavior*, **2021**, 114, 106554	7.7	15
138	Learning Environments: The Case for Evidence-Based Practice and Issue-Driven Research. *Educational Psychology Review*, **2003**, 15, 359-366	7.1	14
137	How Multimedia Can Improve Learning and Instruction **2019**, 460-479		14
136	Old Advice for New Researchers. *Educational Psychology Review*, **2008**, 20, 19-28	7.1	13
135	Navigational Principles in Multimedia Learning **2005**, 297-312		13
134	Integration of information during problem solving due to a meaningful context of learning. *Memory and Cognition*, **1976**, 4, 603-8	2.2	13
133	Can Erroneous Examples Help Middle-School Students Learn Decimals?. *Lecture Notes in Computer Science*, **2011**, 181-195	0.9	13
132	Learning with human and virtual instructors who display happy or bored emotions in video lectures. *Computers in Human Behavior*, **2021**, 119, 106724	7.7	13
131	Evaluating the Cognitive Consequences of Playing Portal for a Short Duration. *Journal of Educational Computing Research*, **2016**, 54, 173-195	3.8	12
130	Multimedia Learning with Simulations and Microworlds729-761		12
129	Multimedia Learning with Video785-812		12
128	Benefits of Teaching Design Skills before Teaching Logo Computer Programming: Evidence for Syntax-Independent Learning. *Journal of Educational Computing Research*, **1994**, 11, 187-210	3.8	12
127	Learner control of the pacing of an online slideshow lesson: Does segmenting help?. *Applied Cognitive Psychology*, **2019**, 33, 930-935	2.1	11
126	Interactive highlighting for just-in-time formative assessment during whole-class instruction: effects on vocabulary learning and reading comprehension. *Interactive Learning Environments*, **2018** , 26, 42-60	3.1	11
125	Using audiovisual TV interviews to create visible authors that reduce the learning gap between native and non-native language speakers. *Learning and Instruction*, **2007**, 17, 67-77	5.8	11
124	Designing multimedia instruction in anatomy: An evidence-based approach. *Clinical Anatomy*, **2020**, 33, 2-11	2.5	11
123	Benefits of Taking a Virtual Field Trip in Immersive Virtual Reality: Evidence for the Immersion Principle in Multimedia Learning.. *Educational Psychology Review*, **2022**, 1-28	7.1	11

122	Shining the Light of Research on Lumosity. *Journal of Cognitive Enhancement: Towards the Integration of Theory and Practice*, **2018**, 2, 43-62	2.4	10
121	Incorporating Individual Differences Into the Science of Learning: Commentary on Sternberg et al. (2008). *Perspectives on Psychological Science*, **2008**, 3, 507-8	9.8	10
120	Multimedia Learning in e-Courses **2005**, 589-616		10
119	Introduction to Multimedia Learning **2021**, 3-16		10
118	Investigating the feasibility of using assessment and explanatory feedback in desktop virtual reality simulations. *Educational Technology Research and Development*, **2020**, 68, 293-317	3.6	10
117	Techniques That Increase Generative Processing in Multimedia Learning: Open Questions for Cognitive Load Research153-178		9
116	Seeking a science of instruction. *Instructional Science*, **2010**, 38, 143-145	2	9
115	Multimedia Learning: GuidingVisuospatial Thinking with Instructional Animation **2005**, 477-508		9
114	Do Learners Recognize and Relate to the Emotions Displayed By Virtual Instructors?. *International Journal of Artificial Intelligence in Education*, **2021**, 31, 134-153	2.5	9
113	How generative drawing affects the learning process: An eye-tracking analysis. *Applied Cognitive Psychology*, **2019**, 33, 1147-1164	2.1	8
112	The Collaboration Principle in Multimedia Learning547-575		8
111	Computer-supported aids to making sense of scientific articles: cognitive, motivational, and attitudinal effects. *Educational Technology Research and Development*, **2009**, 57, 79-97	3.6	8
110	Multimedia Learning of Mathematics **2005**, 393-408		8
109	Understanding Individual Differences in Mathematical Problem Solving: Towards a Research Agenda. *Learning Disability Quarterly*, **1993**, 16, 2-5	0.6	8
108	Cognitive consequences of playing brain-training games in immersive virtual reality. *Applied Cognitive Psychology*, **2020**, 34, 29-38	2.1	8
107	What neurosurgeons should discover about the science of learning. *Clinical Neurosurgery*, **2009**, 56, 57-65		8
106	The Role of Domain Knowledge in Creative Problem Solving145-158		7
105	Multimedia Learning of Cognitive Skills **2005**, 489-504		7

104	Three obstacles to validating the Verbal-Imager Subtest of the Cognitive Styles Analysis. *Personality and Individual Differences*, **2005**, 39, 845-848	3.3	7
103	Learning by Understanding: The Role of Multiple Representations in Learning Algebra		7
102	Models for Understanding		7
101	The Failure of Educational Research to Impact Educational Practice **2005**, 67-81		7
100	Replicated evidence towards a cognitive theory of game-based training.. *Journal of Educational Psychology*, **2020**, 112, 922-937	5.3	7
99	Taking a new look at seductive details. *Applied Cognitive Psychology*, **2019**, 33, 139-141	2.1	7
98	Speed Versus Accuracy: Implications of Adolescents' Neurocognitive Developments in a Digital Game to Train Executive Functions. *Mind, Brain, and Education*, **2019**, 13, 41-52	1.8	6
97	Adding interactive graphic organizers to a whole-class slideshow lesson. *Instructional Science*, **2018**, 46, 973-988	2	6
96	Multimedia Learning of Cognitive Processes623-646		6
95	Study Activities That Foster Generative Learning: Notetaking, Graphic Organizer, and Questioning. *Journal of Educational Computing Research*, **2020**, 58, 275-296	3.8	6
94	Memory and Information Processes47		6
93	Applying the segmenting principle to online geography slideshow lessons. *Educational Technology Research and Development*, **2018**, 66, 563-577	3.6	5
92	PART II: Out-of-School Learning: The Case of an after-School Computer Club. *Journal of Educational Computing Research*, **1997**, 16, 333-336	3.8	5
91	A multimedia effect for multiple-choice and constructed-response test items.. *Journal of Educational Psychology*, **2022**, 114, 72-88	5.3	5
90	Learning a second language by playing a game. *Applied Cognitive Psychology*, **2019**, 33, 669-674	2.1	5
89	Multimedia Learning in e-Courses842-882		4
88	Multimedia Learning with Intelligent Tutoring Systems705-728		4
87	Research-Based Guidelines for Multimedia Instruction. *Reviews of Human Factors and Ergonomics*, **2007**, 3, 127-147		4

86	The Immersion Principle in Multimedia Learning **2021**, 296-303		4
85	The positivity principle: do positive instructors improve learning from video lectures?. *Educational Technology Research and Development*, **2021**, 69, 1-29	3.6	4
84	Accuracy in judgments of study time predicts academic success in an engineering course. *Metacognition and Learning*, **2019**, 14, 215-228	2.7	3
83	Intelligence and Achievement738-747		3
82	Advances in Specifying What Is to Be Learned: Reflections on the Themes in Chapters 6 8203-212		3
81	Deriving instructional design principles from multimedia presentations with animations		3
80	Benefits of Writing an Explanation During Pauses in Multimedia Lessons. *Educational Psychology Review*, **2021**, 33, 1-27	7.1	3
79	Learning about history in immersive virtual reality: does immersion facilitate learning?. *Educational Technology Research and Development*, **2021**, 69, 1433-1451	3.6	3
78	Advances in designing instruction based on examples. *Applied Cognitive Psychology*, **2020**, 34, 912-915	2.1	2
77	The Promise of Multimedia Learning3-27		2
76	What we really need is a theory of mathematical ability. *Behavioral and Brain Sciences*, **1988**, 11, 202-203	0.9	2
75	A Computer-Based Game That Promotes Mathematics Learning More Than a Conventional Approach **2018**, 415-437		2
74	Limits on Training Inhibitory Control with a Focused Video Game. *Journal of Cognitive Enhancement: Towards the Integration of Theory and Practice*, **2021**, 5, 83-98	2.4	2
73	The Power of Voice to Convey Emotion in Multimedia Instructional Messages. *International Journal of Artificial Intelligence in Education*,1	2.5	2
72	How to Design Multimedia Presentations151-159		1
71	The Past and Future of Educational Psychology Review. *Educational Psychology Review*, **2009**, 21, 89-89	7.1	1
70	Instructional Strategies for Directive Learning Environments **2010**, 329-360		1
69	Instructional media and instructional methods in digital language learning: are we asking the right questions?. *Bilingualism*,1-2	3.2	1

68	Effects of Learner-Generated Highlighting and Instructor-Provided Highlighting on Learning from Text: A Meta-Analysis. *Educational Psychology Review*,1	7.1	1
67	Research Methods in Multimedia Learning **2021**, 41-54		1
66	The Worked Example Principle in Multimedia Learning **2021**, 231-240		1
65	Principles for Reducing Extraneous Processing in Multimedia Learning **2021**, 185-198		1
64	The Drawing Principle in Multimedia Learning **2021**, 360-369		1
63	The Collaboration Principle in Multimedia Learning **2021**, 304-312		1
62	The Self-Explanation Principle in Multimedia Learning **2021**, 381-393		1
61	How Does Text Affect the Processing of Diagrams in Multimedia Learning?. *Lecture Notes in Computer Science*, **2010**, 304-306	0.9	1
60	Applying the Coherence Principle: Adding Material Can Hurt Learning150-176		1
59	Does the emotional stance of human and virtual instructors in instructional videos affect learning processes and outcomes?. *Contemporary Educational Psychology*, **2022**, 70, 102080	5.6	1
58	Two Emotional Design Features Are More Effective Than One in Multimedia Learning. *Journal of Educational Computing Research*,073563312210908	3.8	1
57	Multimedia Learning in e-Courses **2021**, 537-551		0
56	The Modality Principle in Multimedia Learning **2021**, 261-267		0
55	Cognitive Theory of Multimedia Learning **2021**, 57-72		0
54	The Split-Attention Principle in Multimedia Learning **2021**, 199-211		0
53	Principles for Managing Essential Processing in Multimedia Learning **2021**, 243-260		0
52	Multimedia Learning with Instructional Video **2021**, 487-497		0
51	Implications of the Four Component Instructional Design Model for Multimedia Learning **2021**, 100-120		0

50	Multimedia Learning with Computer Games **2021**, 472-486		0
49	The Guided Inquiry Principle in Multimedia Learning **2021**, 394-402		0
48	Motivation and Affect in Multimedia Learning **2021**, 121-131		0
47	Multimedia Learning with Simulations **2021**, 461-471		0
46	The Generative Activity Principle in Multimedia Learning **2021**, 339-350		0
45	Principles for Educational Assessment with Multimedia **2021**, 552-565		0
44	Foundations of Multimedia Learning **2021**, 17-24		0
43	Principles Based on Social Cues in Multimedia Learning **2021**, 277-285		0
42	Fifteen Common but Questionable Principles of Multimedia Learning **2021**, 25-40		0
41	The Signaling (or Cueing) Principle in Multimedia Learning **2021**, 221-230		0
40	Multimedia Learning in Virtual and Mixed Reality **2021**, 498-509		0
39	The Feedback Principle in Multimedia Learning **2021**, 403-417		0
38	Playing a Video Game and Learning to Think: What the Connection?. *Journal of Cognitive Enhancement: Towards the Integration of Theory and Practice*,1	2.4	0
37	Does Practice Make Perfect? **2016**, 265-292		
36	Getting Started on the Road to Applying the Science of Learning. *Applied Cognitive Psychology*, **2012**, 26, 330-331	2.1	
35	Learning by Self-Testing97-123		
34	Learning by Teaching151-166		
33	Learning Strategies That Foster Generative Learning192-206		

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29 Instructional Strategies for Receptive Learning Environments **2010**, 298-328

28 BASIC versus natural language. *ACM SIGCHI Bulletin*, **1985**, 16, 221-223

27 The Multimedia Principle **2021**, 145-157

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25 Principles Based on Social and Affective Features of Multimedia Learning **2021**, 275-336

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20 Basic Principles of Multimedia Learning **2021**, 143-182

19 Principles for Managing Essential Processing in Multimedia Learning **2021**, 241-274

18 The Redundancy Principle in Multimedia Learning **2021**, 212-220

17 Multimedia Learning with Media **2021**, 437-565

16 Principles for Reducing Extraneous Processing in Multimedia Learning **2021**, 183-240

15 Multimedia Learning with Visual Displays **2021**, 510-520

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14	The Transient Information Principle in Multimedia Learning **2021**, 268-274	
13	Instructional design as a form of information design. *Information Design Journal*, **2019**, 25, 258-263	0.4
12	Applying the Segmenting and Pretraining Principles: Managing Complexity by Breaking a Lesson into Parts201-218	
11	Guiding Cognitive Processing During Learning with Animations: Commentary on Parts III and IV **2017**, 379-386	
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4	Applying the Coherence Principle: Adding Extra Material Can Hurt Learning **2016**, 151-178	
3	e-Learning: Promise and Pitfalls **2016**, 7-28	
2	Intelligence and Achievement **2019**, 1048-1060	
1	Chapter II: Changing Conceptions of Learning: A Century of Progress in the Scientific Study of Education. *Teachers College Record*, **2001**, 103, 34-75	0.9