

Richard E Mayer

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/9122980/publications.pdf>

Version: 2024-02-01

339
papers

47,617
citations

2795

94
h-index

3094

187
g-index

371
all docs

371
docs citations

371
times ranked

15820
citing authors

#	ARTICLE	IF	CITATIONS
1	Nine Ways to Reduce Cognitive Load in Multimedia Learning. <i>Educational Psychologist</i> , 2003, 38, 43-52.	4.7	2,458
2	Should There Be a Three-Strikes Rule Against Pure Discovery Learning?. <i>American Psychologist</i> , 2004, 59, 14-19.	3.8	1,726
3	Interactive Multimodal Learning Environments. <i>Educational Psychology Review</i> , 2007, 19, 309-326.	5.1	1,002
4	Multimedia learning: Are we asking the right questions?. <i>Educational Psychologist</i> , 1997, 32, 1-19.	4.7	977
5	Cognitive principles of multimedia learning: The role of modality and contiguity.. <i>Journal of Educational Psychology</i> , 1999, 91, 358-368.	2.1	899
6	A split-attention effect in multimedia learning: Evidence for dual processing systems in working memory.. <i>Journal of Educational Psychology</i> , 1998, 90, 312-320.	2.1	880
7	The promise of multimedia learning: using the same instructional design methods across different media. <i>Learning and Instruction</i> , 2003, 13, 125-139.	1.9	819
8	For whom is a picture worth a thousand words? Extensions of a dual-coding theory of multimedia learning.. <i>Journal of Educational Psychology</i> , 1994, 86, 389-401.	2.1	813
9	When is an illustration worth ten thousand words?. <i>Journal of Educational Psychology</i> , 1990, 82, 715-726.	2.1	699
10	Cognitive constraints on multimedia learning: When presenting more material results in less understanding.. <i>Journal of Educational Psychology</i> , 2001, 93, 187-198.	2.1	691
11	The instructive animation: Helping students build connections between words and pictures in multimedia learning.. <i>Journal of Educational Psychology</i> , 1992, 84, 444-452.	2.1	653
12	Adding immersive virtual reality to a science lab simulation causes more presence but less learning. <i>Learning and Instruction</i> , 2019, 60, 225-236.	1.9	632
13	Cognitive Theory of Multimedia Learning. , 2014, , 43-71.		630
14	The Case for Social Agency in Computer-Based Teaching: Do Students Learn More Deeply When They Interact With Animated Pedagogical Agents?. <i>Cognition and Instruction</i> , 2001, 19, 177-213.	1.9	617
15	How seductive details do their damage: A theory of cognitive interest in science learning.. <i>Journal of Educational Psychology</i> , 1998, 90, 414-434.	2.1	599
16	Animations need narrations: An experimental test of a dual-coding hypothesis.. <i>Journal of Educational Psychology</i> , 1991, 83, 484-490.	2.1	584
17	Applying the science of learning: Evidence-based principles for the design of multimedia instruction.. <i>American Psychologist</i> , 2008, 63, 760-769.	3.8	539
18	Models for Understanding. <i>Review of Educational Research</i> , 1989, 59, 43-64.	4.3	522

#	ARTICLE	IF	CITATIONS
19	When learning is just a click away: Does simple user interaction foster deeper understanding of multimedia messages?. <i>Journal of Educational Psychology</i> , 2001, 93, 390-397.	2.1	491
20	Learning science in immersive virtual reality.. <i>Journal of Educational Psychology</i> , 2018, 110, 785-797.	2.1	483
21	Aids to computer-based multimedia learning. <i>Learning and Instruction</i> , 2002, 12, 107-119.	1.9	481
22	Animation as an Aid to Multimedia Learning. <i>Educational Psychology Review</i> , 2002, 14, 87-99.	5.1	477
23	Rote Versus Meaningful Learning. <i>Theory Into Practice</i> , 2002, 41, 226-232.	0.9	455
24	Meta-analysis of action video game impact on perceptual, attentional, and cognitive skills.. <i>Psychological Bulletin</i> , 2018, 144, 77-110.	5.5	434
25	Applying the science of learning to medical education. <i>Medical Education</i> , 2010, 44, 543-549.	1.1	412
26	Eight Ways to Promote Generative Learning. <i>Educational Psychology Review</i> , 2016, 28, 717-741.	5.1	396
27	Implications of Cognitive Load Theory for Multimedia Learning. , 2005, , 19-30.		378
28	A comparison of three measures of cognitive load: Evidence for separable measures of intrinsic, extraneous, and germane load.. <i>Journal of Educational Psychology</i> , 2008, 100, 223-234.	2.1	361
29	The Psychology of How Novices Learn Computer Programming. <i>ACM Computing Surveys</i> , 1981, 13, 121-141.	16.1	340
30	When less is more: Meaningful learning from visual and verbal summaries of science textbook lessons.. <i>Journal of Educational Psychology</i> , 1996, 88, 64-73.	2.1	336
31	Clickers in college classrooms: Fostering learning with questioning methods in large lecture classes. <i>Contemporary Educational Psychology</i> , 2009, 34, 51-57.	1.6	334
32	The role of interest in learning from scientific text and illustrations: On the distinction between emotional interest and cognitive interest.. <i>Journal of Educational Psychology</i> , 1997, 89, 92-102.	2.1	328
33	Supporting visual and verbal learning preferences in a second-language multimedia learning environment.. <i>Journal of Educational Psychology</i> , 1998, 90, 25-36.	2.1	326
34	Systematic thinking fostered by illustrations in scientific text.. <i>Journal of Educational Psychology</i> , 1989, 81, 240-246.	2.1	325
35	Using multimedia for e-learning. <i>Journal of Computer Assisted Learning</i> , 2017, 33, 403-423.	3.3	314
36	When Static Media Promote Active Learning: Annotated Illustrations Versus Narrated Animations in Multimedia Instruction.. <i>Journal of Experimental Psychology: Applied</i> , 2005, 11, 256-265.	0.9	305

#	ARTICLE	IF	CITATIONS
37	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.	2.1	301
38	Learning science in virtual reality multimedia environments: Role of methods and media.. Journal of Educational Psychology, 2002, 94, 598-610.	2.1	301
39	Signaling as a cognitive guide in multimedia learning.. Journal of Educational Psychology, 2001, 93, 377-389.	2.1	299
40	Three Facets of Visual and Verbal Learners: Cognitive Ability, Cognitive Style, and Learning Preference.. Journal of Educational Psychology, 2003, 95, 833-846.	2.1	289
41	Can Advance Organizers Influence Meaningful Learning?. Review of Educational Research, 1979, 49, 371-383.	4.3	288
42	Verbal redundancy in multimedia learning: When reading helps listening.. Journal of Educational Psychology, 2002, 94, 156-163.	2.1	286
43	An Integrated Model of Text and Picture Comprehension. , 2005, , 49-70.		278
44	Role of Guidance, Reflection, and Interactivity in an Agent-Based Multimedia Game.. Journal of Educational Psychology, 2005, 97, 117-128.	2.1	266
45	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.	2.1	264
46	Social cues in multimedia learning: Role of speaker's voice.. Journal of Educational Psychology, 2003, 95, 419-425.	2.1	258
47	Incorporating motivation into multimedia learning. Learning and Instruction, 2014, 29, 171-173.	1.9	258
48	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.	5.1	257
49	Personalized Messages That Promote Science Learning in Virtual Environments.. Journal of Educational Psychology, 2004, 96, 165-173.	2.1	249
50	Fostering social agency in multimedia learning: Examining the impact of an animated agent's voice. Contemporary Educational Psychology, 2005, 30, 117-139.	1.6	247
51	Implications of Cognitive Load Theory for Multimedia Learning. , 2014, , 27-42.		243
52	Aids to text comprehension. Educational Psychologist, 1984, 19, 30-42.	4.7	238
53	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.	2.0	234
54	Revising the Visualizer-Verbalizer Dimension: Evidence for Two Types of Visualizers. Cognition and Instruction, 2002, 20, 47-77.	1.9	233

#	ARTICLE	IF	CITATIONS
55	Role of examples in how students learn to categorize statistics word problems.. Journal of Educational Psychology, 1996, 88, 144-161.	2.1	230
56	The Split-Attention Principle in Multimedia Learning. , 2005, , 135-146.		230
57	Engaging students in active learning: The case for personalized multimedia messages.. Journal of Educational Psychology, 2000, 92, 724-733.	2.1	229
58	Domain specificity of spatial expertise: the case of video game players. Applied Cognitive Psychology, 2002, 16, 97-115.	0.9	227
59	Motivational and cognitive benefits of training in immersive virtual reality based on multiple assessments. Journal of Computer Assisted Learning, 2019, 35, 691-707.	3.3	225
60	Five facets of social presence in online distance education. Computers in Human Behavior, 2012, 28, 1738-1747.	5.1	222
61	The politeness effect: Pedagogical agents and learning outcomes. International Journal of Human Computer Studies, 2008, 66, 98-112.	3.7	215
62	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.	5.1	214
63	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.	2.1	213
64	Students' miscomprehension of relational statements in arithmetic word problems.. Journal of Educational Psychology, 1987, 79, 363-371.	2.1	210
65	Revising the redundancy principle in multimedia learning.. Journal of Educational Psychology, 2008, 100, 380-386.	2.1	207
66	Maximizing constructivist learning from multimedia communications by minimizing cognitive load.. Journal of Educational Psychology, 1999, 91, 638-643.	2.1	199
67	The relative benefits of learning by teaching and teaching expectancy. Contemporary Educational Psychology, 2013, 38, 281-288.	1.6	199
68	Benefits of emotional design in multimedia instruction. Learning and Instruction, 2014, 33, 12-18.	1.9	195
69	Computer Games in Education. Annual Review of Psychology, 2019, 70, 531-549.	9.9	188
70	An embodiment effect in computer-based learning with animated pedagogical agents.. Journal of Experimental Psychology: Applied, 2012, 18, 239-252.	0.9	186
71	Principles for Reducing Extraneous Processing in Multimedia Learning: Coherence, Signaling, Redundancy, Spatial Contiguity, and Temporal Contiguity Principles. , 2014, , 279-315.		185
72	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.	2.1	184

#	ARTICLE	IF	CITATIONS
73	Unique contributions of eye-tracking research to the study of learning with graphics. Learning and Instruction, 2010, 20, 167-171.	1.9	181
74	Cognition and instruction: Their historic meeting within educational psychology.. Journal of Educational Psychology, 1992, 84, 405-412.	2.1	179
75	Structural differences between outcomes produced by different instructional methods.. Journal of Educational Psychology, 1972, 63, 165-173.	2.1	178
76	Adding Instructional Features That Promote Learning in a Game-Like Environment. Journal of Educational Computing Research, 2010, 42, 241-265.	3.6	176
77	Testing the ATI hypothesis: Should multimedia instruction accommodate verbalizer-visualizer cognitive style?. Learning and Individual Differences, 2006, 16, 321-335.	1.5	164
78	An eye movement analysis of the spatial contiguity effect in multimedia learning.. Journal of Experimental Psychology: Applied, 2012, 18, 178-191.	0.9	157
79	Signaling techniques that increase the understandability of expository prose.. Journal of Educational Psychology, 1983, 75, 402-412.	2.1	155
80	Thirty years of research on online learning. Applied Cognitive Psychology, 2019, 33, 152-159.	0.9	154
81	Computer Games for Learning. , 2014, , .		154
82	Improving Methodological Standards in Behavioral Interventions for Cognitive Enhancement. Journal of Cognitive Enhancement: Towards the Integration of Theory and Practice, 2019, 3, 2-29.	0.8	149
83	Teaching students to solve insight problems: Evidence for domain specificity in creativity training. Creativity Research Journal, 2004, 16, 389-398.	1.7	148
84	Narrative games for learning: Testing the discovery and narrative hypotheses.. Journal of Educational Psychology, 2012, 104, 235-249.	2.1	148
85	A testing effect with multimedia learning.. Journal of Educational Psychology, 2009, 101, 621-629.	2.1	147
86	Generative effects of note-taking during science lectures.. Journal of Educational Psychology, 1986, 78, 34-38.	2.1	145
87	Multimedia aids to problem-solving transfer. International Journal of Educational Research, 1999, 31, 611-623.	1.2	144
88	Integrated Model of Text and Picture Comprehension. , 2014, , 72-103.		143
89	Applying multimedia design principles enhances learning in medical education. Medical Education, 2011, 45, 818-826.	1.1	140
90	Note taking as a generative activity.. Journal of Educational Psychology, 1978, 70, 514-522.	2.1	139

#	ARTICLE	IF	CITATIONS
91	Teaching readers about the structure of scientific text.. Journal of Educational Psychology, 1988, 80, 448-456.	2.1	133
92	The Self-Explanation Principle in Multimedia Learning. , 2005, , 271-286.		133
93	Applying the self-explanation principle to multimedia learning in a computer-based game-like environment. Computers in Human Behavior, 2010, 26, 1246-1252.	5.1	133
94	Comprehension of arithmetic word problems: Evidence from students' eye fixations.. Journal of Educational Psychology, 1992, 84, 76-84.	2.1	132
95	Pictorial aids for learning by doing in a multimedia geology simulation game.. Journal of Educational Psychology, 2002, 94, 171-185.	2.1	129
96	Increased interestingness of extraneous details in a multimedia science presentation leads to decreased learning.. Journal of Experimental Psychology: Applied, 2008, 14, 329-339.	0.9	129
97	The Multimedia Principle. , 2014, , 174-205.		129
98	Five ways to increase the effectiveness of instructional video. Educational Technology Research and Development, 2020, 68, 837-852.	2.0	128
99	Frequency norms and structural analysis of algebra story problems into families, categories, and templates. Instructional Science, 1981, 10, 135-175.	1.1	127
100	Principles Based on Social Cues in Multimedia Learning: Personalization, Voice, Image, and Embodiment Principles. , 2014, , 345-368.		126
101	Drawing as a generative activity and drawing as a prognostic activity.. Journal of Educational Psychology, 2010, 102, 872-879.	2.1	125
102	Individual differences in cognitive style and strategy predict similarities in the patterns of brain activity between individuals. NeuroImage, 2012, 59, 83-93.	2.1	123
103	Role of expectations and explanations in learning by teaching. Contemporary Educational Psychology, 2014, 39, 75-85.	1.6	121
104	Cognitive and affective processes for learning science in immersive virtual reality. Journal of Computer Assisted Learning, 2021, 37, 226-241.	3.3	119
105	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.	2.1	119
106	The Signaling (or Cueing) Principle in Multimedia Learning. , 2014, , 263-278.		118
107	Can you repeat that? Qualitative effects of repetition and advance organizers on learning from science prose.. Journal of Educational Psychology, 1983, 75, 40-49.	2.1	111
108	The Split-Attention Principle in Multimedia Learning. , 2014, , 206-226.		111

#	ARTICLE	IF	CITATIONS
109	Multimedia Learning in Games, Simulations, and Microworlds. , 2005, , 549-568.		109
110	The Self-Explanation Principle in Multimedia Learning. , 2014, , 413-432.		109
111	The Multimedia Principle. , 2005, , 117-134.		108
112	Prior Knowledge Principle in Multimedia Learning. , 2005, , 325-338.		107
113	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.	3.3	105
114	The Modality Principle in Multimedia Learning. , 2005, , 147-158.		104
115	The Redundancy Principle in Multimedia Learning. , 2014, , 247-262.		104
116	Does the modality principle for multimedia learning apply to science classrooms?. Learning and Instruction, 2007, 17, 465-477.	1.9	96
117	Effects of observing the instructor draw diagrams on learning from multimedia messages.. Journal of Educational Psychology, 2016, 108, 528-546.	2.1	95
118	Principles for Managing Essential Processing in Multimedia Learning: Segmenting, Pre-training, and Modality Principles. , 2014, , 316-344.		93
119	Multimedia-Supported Metaphors for Meaning Making in Mathematics. Cognition and Instruction, 1999, 17, 215-248.	1.9	92
120	A Comparison of How Textbooks Teach Mathematical Problem Solving in Japan and the United States. American Educational Research Journal, 1995, 32, 443.	1.6	91
121	A Computer-Based Game that Promotes Mathematics Learning More than a Conventional Approach. International Journal of Game-Based Learning, 2017, 7, 36-56.	0.9	91
122	The virtual field trip: Investigating how to optimize immersive virtual learning in climate change education. British Journal of Educational Technology, 2020, 51, 2099-2115.	3.9	88
123	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.	0.9	86
124	Cognitive aids for guiding graph comprehension.. Journal of Educational Psychology, 2007, 99, 640-652.	2.1	83
125	Questioning as an instructional method: Does it affect learning from lectures?. Applied Cognitive Psychology, 2009, 23, 747-759.	0.9	82
126	Multimedia Learning in Second Language Acquisition. , 2005, , 467-488.		81

#	ARTICLE	IF	CITATIONS
127	Drawing pictures during learning from scientific text: testing the generative drawing effect and the prognostic drawing effect. <i>Contemporary Educational Psychology</i> , 2014, 39, 275-286.	1.6	81
128	When graphics improve liking but not learning from online lessons. <i>Computers in Human Behavior</i> , 2012, 28, 1618-1625.	5.1	80
129	Teaching for understanding in medical classrooms using multimedia design principles. <i>Medical Education</i> , 2013, 47, 388-396.	1.1	80
130	Comprehension as affected by structure of problem representation. <i>Memory and Cognition</i> , 1976, 4, 249-255.	0.9	79
131	Using erroneous examples to improve mathematics learning with a web-based tutoring system. <i>Computers in Human Behavior</i> , 2014, 36, 401-411.	5.1	79
132	Animated pedagogical agents as aids in multimedia learning: Effects on eye-fixations during learning and learning outcomes.. <i>Journal of Educational Psychology</i> , 2018, 110, 250-268.	2.1	78
133	Brief Note: A Comparison of How Textbooks Teach Mathematical Problem Solving in Japan and the United States. <i>American Educational Research Journal</i> , 1995, 32, 443-460.	1.6	77
134	Instructor presence in video lectures: The role of dynamic drawings, eye contact, and instructor visibility.. <i>Journal of Educational Psychology</i> , 2019, 111, 1162-1171.	2.1	75
135	The Expertise Reversal Principle in Multimedia Learning. , 2014, , 576-597.		74
136	Learning by viewing versus learning by doing: Evidence-based guidelines for principled learning environments. <i>Performance Improvement</i> , 2008, 47, 5-13.	0.4	73
137	Techniques That Reduce Extraneous Cognitive Load and Manage Intrinsic Cognitive Load during Multimedia Learning. , 2010, , 131-152.		73
138	It's all a matter of perspective: Viewing first-person video modeling examples promotes learning of an assembly task.. <i>Journal of Educational Psychology</i> , 2017, 109, 653-665.	2.1	72
139	Teaching students to recognize structural similarities between statistics word problems. <i>Applied Cognitive Psychology</i> , 2002, 16, 325-342.	0.9	70
140	Getting a handle on learning anatomy with interactive three-dimensional graphics.. <i>Journal of Educational Psychology</i> , 2009, 101, 803-816.	2.1	70
141	The Guided Discovery Learning Principle in Multimedia Learning. , 2014, , 371-390.		70
142	Multimedia Learning in a Second Language: A Cognitive Load Perspective. <i>Applied Cognitive Psychology</i> , 2014, 28, 653-660.	0.9	69
143	An eye-tracking analysis of instructor presence in video lectures. <i>Computers in Human Behavior</i> , 2018, 88, 263-272.	5.1	69
144	Multimedia Learning with Animated Pedagogical Agents. , 2005, , 507-524.		68

#	ARTICLE	IF	CITATIONS
145	Five Common but Questionable Principles of Multimedia Learning. , 2005, , 97-116.		67
146	Constructing computer-based tutors that are socially sensitive: Politeness in educational software. International Journal of Human Computer Studies, 2006, 64, 36-42.	3.7	67
147	Polite web-based intelligent tutors: Can they improve learning in classrooms?. Computers and Education, 2011, 56, 574-584.	5.1	67
148	An eye movement analysis of highlighting and graphic organizer study aids for learning from expository text. Computers in Human Behavior, 2014, 41, 21-32.	5.1	67
149	Searching for the role of emotions in e-learning. Learning and Instruction, 2020, 70, 101213.	1.9	66
150	Benefits of Taking a Virtual Field Trip in Immersive Virtual Reality: Evidence for the Immersion Principle in Multimedia Learning. Educational Psychology Review, 2022, 34, 1771-1798.	5.1	66
151	Evidence-based principles for how to design effective instructional videos.. Journal of Applied Research in Memory and Cognition, 2021, 10, 229-240.	0.7	64
152	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.	0.9	62
153	The Modality Principle in Multimedia Learning. , 2014, , 227-246.		59
154	Online multimedia learning with mobile devices and desktop computers: An experimental test of Clark's methods-not-media hypothesis. Computers in Human Behavior, 2013, 29, 639-647.	5.1	58
155	Spontaneous spatial strategy use in learning from scientific text. Contemporary Educational Psychology, 2017, 49, 66-79.	1.6	58
156	Learning executive function skills by playing focused video games. Contemporary Educational Psychology, 2017, 51, 141-151.	1.6	58
157	The Guided Discovery Principle in Multimedia Learning. , 2005, , 215-228.		56
158	Does styles research have useful implications for educational practice?. Learning and Individual Differences, 2011, 21, 319-320.	1.5	56
159	The Case for Coherence in Scientific Explanations: Quantitative Details Can Hurt Qualitative Understanding.. Journal of Experimental Psychology: Applied, 2005, 11, 13-18.	0.9	55
160	Multimedia Instruction. , 2014, , 385-399.		54
161	Animation Principles in Multimedia Learning. , 2014, , 513-546.		53
162	The Four-Component Instructional Design Model: Multimedia Principles in Environments for Complex Learning. , 2014, , 104-148.		53

#	ARTICLE	IF	CITATIONS
163	A taxonomy for computer-based assessment of problem solving. Computers in Human Behavior, 2002, 18, 623-632.	5.1	52
164	A politeness effect in learning with web-based intelligent tutors. International Journal of Human Computer Studies, 2011, 69, 70-79.	3.7	52
165	Getting the point: Which kinds of gestures by pedagogical agents improve multimedia learning?. Journal of Educational Psychology, 2019, 111, 1382-1395.	2.1	52
166	The sequencing of instruction and the concept of assimilation-to-schema. Instructional Science, 1977, 6, 369-388.	1.1	51
167	The Four-Component Instructional Design Model : Multimedia Principles in Environments for Complex Learning. , 2005, , 71-94.		51
168	Paper-based aids for learning with a computer-based game.. Journal of Educational Psychology, 2012, 104, 1074-1082.	2.1	51
169	Learning with human and virtual instructors who display happy or bored emotions in video lectures. Computers in Human Behavior, 2021, 119, 106724.	5.1	51
170	Teaching of Subject Matter. Annual Review of Psychology, 2004, 55, 715-744.	9.9	49
171	Applying the Science of Learning to Multimedia Instruction. Psychology of Learning and Motivation - Advances in Research and Theory, 2011, , 77-108.	0.5	48
172	Adding self-explanation prompts to an educational computer game. Computers in Human Behavior, 2014, 30, 23-28.	5.1	47
173	Qualitatively different cognitive processing during online reading primed by different study activities. Computers in Human Behavior, 2014, 30, 121-130.	5.1	47
174	Recognizing the emotional state of human and virtual instructors. Computers in Human Behavior, 2021, 114, 106554.	5.1	47
175	Using transparent whiteboards to boost learning from online STEM lectures. Computers and Education, 2018, 120, 146-159.	5.1	45
176	What Should Be the Role of Computer Games in Education?. Policy Insights From the Behavioral and Brain Sciences, 2016, 3, 20-26.	1.4	44
177	What Good is Educational Psychology? The Case of Cognition and Instruction. Educational Psychologist, 2001, 36, 83-88.	4.7	43
178	Equivalence of using a desktop virtual reality science simulation at home and in class. PLoS ONE, 2019, 14, e0214944.	1.1	43
179	An imagination effect in learning from scientific text.. Journal of Educational Psychology, 2015, 107, 47-63.	2.1	42
180	Forward transfer of different reading strategies evoked by testlike events in mathematics text.. Journal of Educational Psychology, 1975, 67, 165-169.	2.1	41

#	ARTICLE	IF	CITATIONS
181	Multimedia Learning with Hypermedia. , 2005, , 569-588.		41
182	Creating retroactive and proactive interference in multimedia learning. Applied Cognitive Psychology, 2007, 21, 795-809.	0.9	40
183	How Can Brain Research Inform Academic Learning and Instruction?. Educational Psychology Review, 2017, 29, 835-846.	5.1	39
184	Research-based principles for the design of instructional messages. Information Design Journal, 1999, 1, 7-19.	0.0	38
185	Learning to Be Literate. , 0, , 605-625.		38
186	Fostering learning from instructional video in a second language. Applied Cognitive Psychology, 2018, 32, 648-654.	0.9	38
187	Young adults learning executive function skills by playing focused video games. Cognitive Development, 2019, 49, 43-50.	0.7	38
188	Learning about history in immersive virtual reality: does immersion facilitate learning?. Educational Technology Research and Development, 2021, 69, 1433-1451.	2.0	37
189	The Feedback Principle in Multimedia Learning. , 2014, , 449-463.		35
190	Where is the learning in mobile technologies for learning?. Contemporary Educational Psychology, 2020, 60, 101824.	1.6	35
191	Affective impact of navigational and signaling aids to e-learning. Computers in Human Behavior, 2012, 28, 473-483.	5.1	34
192	On the Need for Research Evidence to Guide the Design of Computer Games for Learning. Educational Psychologist, 2015, 50, 349-353.	4.7	34
193	Multimedia Learning of Chemistry. , 2005, , 409-428.		33
194	Cognitive consequences of making computer-based learning activities more game-like. Computers in Human Behavior, 2011, 27, 2011-2016.	5.1	33
195	The Generative Drawing Principle in Multimedia Learning. , 2014, , 433-448.		33
196	Students' beliefs about mobile devices Vs. desktop computers in South Korea and the United States. Computers and Education, 2012, 59, 1328-1338.	5.1	32
197	The Worked Examples Principle in Multimedia Learning. , 2014, , 391-412.		32
198	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.	3.9	32

#	ARTICLE	IF	CITATIONS
199	Benefits of adding anxiety-reducing features to a computer-based multimedia lesson on statistics. Computers in Human Behavior, 2016, 63, 293-303.	5.1	32
200	How Multimedia Can Improve Learning and Instruction. , 2019, , 460-479.		32
201	Do Learners Recognize and Relate to the Emotions Displayed By Virtual Instructors?. International Journal of Artificial Intelligence in Education, 2021, 31, 134-153.	3.9	32
202	Introduction to Multimedia Learning. , 2021, , 3-16.		32
203	Overestimation Bias in Self-reported SAT Scores. Educational Psychology Review, 2007, 19, 443-454.	5.1	31
204	Forward transfer of different reading strategies evoked by adjunct questions in science text.. Journal of Educational Psychology, 1987, 79, 189-191.	2.1	30
205	The Learner Control Principle in Multimedia Learning. , 2014, , 487-512.		29
206	Does the Brain Have a Place in Educational Psychology?. Educational Psychology Review, 1998, 10, 389-396.	5.1	27
207	Ten Common but Questionable Principles of Multimedia Learning. , 0, , 151-173.		27
208	Role of Interactivity in Learning from Engineering Animations. Applied Cognitive Psychology, 2015, 29, 614-620.	0.9	27
209	How generative drawing affects the learning process: An eye-tracking analysis. Applied Cognitive Psychology, 2019, 33, 1147-1164.	0.9	27
210	The positivity principle: do positive instructors improve learning from video lectures?. Educational Technology Research and Development, 2021, 69, 3101-3129.	2.0	27
211	What have we learned about increasing the meaningfulness of science prose?. Science Education, 1983, 67, 223-237.	1.8	26
212	Note-taking fosters generative learning strategies in novices.. Journal of Educational Psychology, 1989, 81, 263-264.	2.1	26
213	Knowledge and processes that predict proficiency in digital literacy. Reading and Writing, 2014, 27, 1567-1583.	1.0	26
214	What is Learned in an After-School Computer Club?. Journal of Educational Computing Research, 1999, 20, 223-235.	3.6	25
215	Merlin C. Wittrock's Enduring Contributions to the Science of Learning. Educational Psychologist, 2010, 45, 46-50.	4.7	24
216	Investigating the feasibility of using assessment and explanatory feedback in desktop virtual reality simulations. Educational Technology Research and Development, 2020, 68, 293-317.	2.0	24

#	ARTICLE	IF	CITATIONS
217	Multimedia Learning with Video. , 2014, , 785-812.		23
218	Game over for Tetris as a platform for cognitive skill training. Contemporary Educational Psychology, 2018, 54, 29-41.	1.6	22
219	Effects of shadowing on prose comprehension and problem solving. Memory and Cognition, 1981, 9, 101-109.	0.9	21
220	The Cognitive Aging Principle in Multimedia Learning. , 2005, , 339-352.		21
221	Multimedia Learning of Metacognitive Strategies. , 2014, , 647-672.		21
222	Shining the Light of Research on Lumosity. Journal of Cognitive Enhancement: Towards the Integration of Theory and Practice, 2018, 2, 43-62.	0.8	21
223	The case for embodied instruction: The instructor as a source of attentional and social cues in video lectures.. Journal of Educational Psychology, 2021, 113, 1441-1453.	2.1	21
224	Learning Environments: The Case for Evidence-Based Practice and Issue-Driven Research. Educational Psychology Review, 2003, 15, 359-366.	5.1	20
225	Cognitive Consequences of Participation in a "Fifth Dimension" after-School Computer Club. Journal of Educational Computing Research, 1997, 16, 353-369.	3.6	19
226	Towards a science of motivated learning in technology-supported environments. Educational Technology Research and Development, 2011, 59, 301-308.	2.0	19
227	Navigational Principles in Multimedia Learning. , 2005, , 297-312.		18
228	Multimedia Learning of Mathematics. , 2005, , 393-408.		18
229	Techniques That Increase Generative Processing in Multimedia Learning: Open Questions for Cognitive Load Research. , 2010, , 153-178.		18
230	Visual Aids to Learning in a Second Language: Adding Redundant Video to an Audio Lecture. Applied Cognitive Psychology, 2015, 29, 445-454.	0.9	18
231	Evaluating the Cognitive Consequences of Playing Portal for a Short Duration. Journal of Educational Computing Research, 2016, 54, 173-195.	3.6	18
232	Multimedia Learning: Guiding Visuospatial Thinking with Instructional Animation. , 2005, , 477-508.		18
233	Cognitive Theory of Multimedia Learning. , 2021, , 57-72.		18
234	Multimedia Learning with Simulations and Microworlds. , 2014, , 729-761.		17

#	ARTICLE	IF	CITATIONS
235	Can Erroneous Examples Help Middle-School Students Learn Decimals?. Lecture Notes in Computer Science, 2011, , 181-195.	1.0	17
236	Benefits of Teaching Design Skills before Teaching Logo Computer Programming: Evidence for Syntax-Independent Learning. Journal of Educational Computing Research, 1994, 11, 187-210.	3.6	16
237	Old Advice for New Researchers. Educational Psychology Review, 2008, 20, 19-28.	5.1	16
238	Cognitive consequences of playing brain-training games in immersive virtual reality. Applied Cognitive Psychology, 2020, 34, 29-38.	0.9	16
239	The Power of Voice to Convey Emotion in Multimedia Instructional Messages. International Journal of Artificial Intelligence in Education, 2022, 32, 971-990.	3.9	16
240	Integration of information during problem solving due to a meaningful context of learning. Memory and Cognition, 1976, 4, 603-608.	0.9	15
241	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.	1.9	15
242	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.	4.4	15
243	Learner control of the pacing of an online slideshow lesson: Does segmenting help?. Applied Cognitive Psychology, 2019, 33, 930-935.	0.9	15
244	Replicated evidence towards a cognitive theory of game-based training.. Journal of Educational Psychology, 2020, 112, 922-937.	2.1	15
245	Adding interactive graphic organizers to a whole-class slideshow lesson. Instructional Science, 2018, 46, 973-988.	1.1	14
246	Designing multimedia instruction in anatomy: An evidence-based approach. Clinical Anatomy, 2020, 33, 2-11.	1.5	14
247	Benefits of Writing an Explanation During Pauses in Multimedia Lessons. Educational Psychology Review, 2021, 33, 1859-1885.	5.1	14
248	Multimedia Learning in e-Courses. , 2005, , 589-616.		13
249	Animated pedagogical agents enhance learning outcomes and brain activity during learning. Journal of Computer Assisted Learning, 2022, 38, 621-637.	3.3	13
250	Seeking a science of instruction. Instructional Science, 2010, 38, 143-145.	1.1	12
251	Incorporating Individual Differences Into the Science of Learning: Commentary on Sternberg et al. (2008). Perspectives on Psychological Science, 2008, 3, 507-508.	5.2	11
252	Study Activities That Foster Generative Learning: Notetaking, Graphic Organizer, and Questioning. Journal of Educational Computing Research, 2020, 58, 275-296.	3.6	11

#	ARTICLE	IF	CITATIONS
253	Understanding Individual Differences in Mathematical Problem Solving: Towards a Research Agenda. Learning Disability Quarterly, 1993, 16, 2-5.	0.9	10
254	The Role of Domain Knowledge in Creative Problem Solving. , 0, , 145-158.		10
255	Advances in Applying the Science of Learning and Instruction to Education. Psychological Science in the Public Interest: A Journal of the American Psychological Society, 2008, 9, i-ii.	6.7	10
256	Computer-supported aids to making sense of scientific articles: cognitive, motivational, and attitudinal effects. Educational Technology Research and Development, 2009, 57, 79-97.	2.0	10
257	Multimedia Learning in e-Courses. , 2014, , 842-882.		10
258	The Collaboration Principle in Multimedia Learning. , 2014, , 547-575.		10
259	Applying the segmenting principle to online geography slideshow lessons. Educational Technology Research and Development, 2018, 66, 563-577.	2.0	10
260	Speed Versus Accuracy: Implications of Adolescents' Neurocognitive Developments in a Digital Game to Train Executive Functions. Mind, Brain, and Education, 2019, 13, 41-52.	0.9	10
261	Learning a second language by playing a game. Applied Cognitive Psychology, 2019, 33, 669-674.	0.9	10
262	The Immersion Principle in Multimedia Learning. , 2021, , 296-303.		10
263	What neurosurgeons should discover about the science of learning. Clinical Neurosurgery, 2009, 56, 57-65.	0.2	10
264	Does the emotional stance of human and virtual instructors in instructional videos affect learning processes and outcomes?. Contemporary Educational Psychology, 2022, 70, 102080.	1.6	10
265	Taking a new look at seductive details. Applied Cognitive Psychology, 2019, 33, 139-141.	0.9	9
266	The Failure of Educational Research to Impact Educational Practice. , 2005, , 67-81.		9
267	Principles for Reducing Extraneous Processing in Multimedia Learning. , 2021, , 185-198.		9
268	The Signaling (or Cueing) Principle in Multimedia Learning. , 2021, , 221-230.		9
269	Multimedia Learning of Cognitive Skills. , 2005, , 489-504.		8
270	Three obstacles to validating the Verbal-Imager Subtest of the Cognitive Styles Analysis. Personality and Individual Differences, 2005, 39, 845-848.	1.6	8

#	ARTICLE	IF	CITATIONS
271	The Promise of Multimedia Learning. , 2009, , 3-27.		8
272	Intelligence and Achievement. , 0, , 738-747.		8
273	Benefits of interactive graphic organizers in online learning: Evidence for generative learning theory.. Journal of Educational Psychology, 2021, 113, 1024-1037.	2.1	8
274	Models for Understanding. Review of Educational Research, 1989, 59, 43.	4.3	8
275	Multimedia Learning of Cognitive Processes. , 2014, , 623-646.		7
276	Learning by Understanding: The Role of Multiple Representations in Learning Algebra. , 0, .		7
277	The Modality Principle in Multimedia Learning. , 2021, , 261-267.		7
278	Two Emotional Design Features Are More Effective Than One in Multimedia Learning. Journal of Educational Computing Research, 2023, 60, 1991-2014.	3.6	7
279	Research-Based Guidelines for Multimedia Instruction. Reviews of Human Factors and Ergonomics, 2007, 3, 127-147.	0.5	6
280	Advances in designing instruction based on examples. Applied Cognitive Psychology, 2020, 34, 912-915.	0.9	6
281	Principles for Managing Essential Processing in Multimedia Learning. , 2021, , 243-260.		6
282	Principles Based on Social Cues in Multimedia Learning. , 2021, , 277-285.		6
283	A multimedia effect for multiple-choice and constructed-response test items.. Journal of Educational Psychology, 2022, 114, 72-88.	2.1	6
284	PART II: Out-of-School Learning: The Case of an after-School Computer Club. Journal of Educational Computing Research, 1997, 16, 333-336.	3.6	5
285	Accuracy in judgments of study time predicts academic success in an engineering course. Metacognition and Learning, 2019, 14, 215-228.	1.3	5
286	Multimedia Learning with Instructional Video. , 2021, , 487-497.		5
287	Multimedia Learning in Virtual and Mixed Reality. , 2021, , 498-509.		5
288	Effects of Learner-Generated Highlighting and Instructor-Provided Highlighting on Learning from Text: A Meta-Analysis. Educational Psychology Review, 0, , 1.	5.1	5

#	ARTICLE	IF	CITATIONS
289	Deriving instructional design principles from multimedia presentations with animations. , 0, , .		4
290	Multimedia Learning with Intelligent Tutoring Systems. , 2014, , 705-728.		4
291	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.	0.8	4
292	The Worked Example Principle in Multimedia Learning. , 2021, , 231-240.		4
293	The Embodiment Principle in Multimedia Learning. , 2021, , 286-295.		4
294	The Generative Activity Principle in Multimedia Learning. , 2021, , 339-350.		4
295	The Self-Explanation Principle in Multimedia Learning. , 2021, , 381-393.		4
296	Instructional media and instructional methods in digital language learning: Are we asking the right questions?. Bilingualism, 2022, 25, 396-397.	1.0	4
297	To foster meaningful learning: Is science still relevant?. Issues in Education, 1999, 5, 255-260.	0.2	3
298	Advances in Specifying What Is to Be Learned: Reflections on the Themes in Chapters 6â€“8. , 0, , 203-212.		3
299	A Computer-Based Game That Promotes Mathematics Learning More Than a Conventional Approach. , 2018, , 415-437.		3
300	The Split-Attention Principle in Multimedia Learning. , 2021, , 199-211.		3
301	The Guided Inquiry Principle in Multimedia Learning. , 2021, , 394-402.		3
302	The Redundancy Principle in Multimedia Learning. , 2021, , 212-220.		3
303	What we really need is a theory of mathematical ability. Behavioral and Brain Sciences, 1988, 11, 202-203.	0.4	2
304	The Multimedia Principle. , 2021, , 145-157.		2
305	Research Methods in Multimedia Learning. , 2021, , 41-54.		2
306	Motivation and Affect in Multimedia Learning. , 2021, , 121-131.		2

#	ARTICLE	IF	CITATIONS
307	Metacognition in Multimedia Learning. , 2021, , 132-142.		2
308	Multimedia Learning with Simulations. , 2021, , 461-471.		2
309	The Collaboration Principle in Multimedia Learning. , 2021, , 304-312.		2
310	Principles for Educational Assessment with Multimedia. , 2021, , 552-565.		2
311	Foundations of Multimedia Learning. , 2021, , 17-24.		2
312	The Transient Information Principle in Multimedia Learning. , 2021, , 268-274.		2
313	The Feedback Principle in Multimedia Learning. , 2021, , 403-417.		2
314	Chapter II: Changing Conceptions of Learning: A Century of Progress in the Scientific Study of Education. Teachers College Record, 2001, 103, 34-75.	0.4	2
315	The Past and Future of Educational Psychology Review. Educational Psychology Review, 2009, 21, 89-89.	5.1	1
316	Principles for Managing Essential Processing in Multimedia Learning. , 0, , 171-174.		1
317	Instructional Strategies for Directive Learning Environments. , 2010, , 329-360.		1
318	Instructional Strategies for Receptive Learning Environments. , 2010, , 298-328.		1
319	How to Design Multimedia Presentations. , 0, , 151-159.		1
320	Intelligence and Achievement. , 2019, , 1048-1060.		1
321	Playing a Video Game and Learning to Think: What's the Connection?. Journal of Cognitive Enhancement: Towards the Integration of Theory and Practice, 0, , 1.	0.8	1
322	How Does Text Affect the Processing of Diagrams in Multimedia Learning?. Lecture Notes in Computer Science, 2010, , 304-306.	1.0	1
323	Guiding Cognitive Processing During Learning with Animations: Commentary on Parts III and IV. , 2017, , 379-386.		1
324	Multimedia Learning in e-Courses. , 2021, , 537-551.		1

#	ARTICLE	IF	CITATIONS
325	The Emotional Design Principle in Multimedia Learning. , 2021, , 324-336.		1
326	Implications of the Four Component Instructional Design Model for Multimedia Learning. , 2021, , 100-120.		1
327	Multimedia Learning with Computer Games. , 2021, , 472-486.		1
328	The Drawing Principle in Multimedia Learning. , 2021, , 360-369.		1
329	Fifteen Common but Questionable Principles of Multimedia Learning. , 2021, , 25-40.		1
330	BASIC versus natural language. ACM SIGCHI Bulletin, 1985, 16, 221-223.	0.2	0
331	PRINCIPLES FOR FOSTERING GENERATIVE PROCESSING IN MULTIMEDIA LEARNING. , 0, , 221-222.		0
332	Getting Started on the Road to Applying the Science of Learning. Applied Cognitive Psychology, 2012, 26, 330-331.	0.9	0
333	Learning by Self-Testing. , 0, , 97-123.		0
334	Learning by Teaching. , 0, , 151-166.		0
335	Learning Strategies That Foster Generative Learning. , 0, , 192-206.		0
336	Measuring and Increasing Self-Efficacy in a Game. , 2021, , 131-158.		0
337	Instructional design as a form of information design. Information Design Journal, 2019, 25, 258-263.	0.4	0
338	The Mapping Principle in Multimedia Learning. , 2021, , 351-359.		0
339	Multimedia Learning with Visual Displays. , 2021, , 510-520.		0