

Index

A

A New Global Environment for Learning (ANGEL) 64
 accessibility 17, 230
 active-processing assumption 197
 adaptive hypermedia 177
 “add-on” approach 29
 ADDIE 117
 ADSL 279
 affordability 75
 AIDS 273
 AIDS prevention x, 271
 AIDS test 273
 ANAPRO 301
 androgyny ix
 animation 5, 145
 appropriate technology 33
 artificial intelligence 215
 Ascension Flock of Birds Tracking System 330
 associative processing 190
 asynchronous collaborative learning 166
 attitudes 228
 audio CD 390
 audiolingual approach 379
 auditory 136
 authenticity 122
 autonomy 75, 162, 295

B

bandwidth 12
 behaviorism ix, 118
 Blooms Taxonomy 65
 boundary layer 297
 bricolage-type activity 275
 “brokerage system” 250

C

CAI (computer-assisted instruction) 290
 CAL (computer-assisted learning) 11
 CALL 382
 cartography teaching 311
 Cave Automated Virtual Environment (CAVE) 327, 329
 characteristics of educational software 114
 chat 166
 chat and discussion list 294
 chat rooms 42
 chemical engineering education 293
 class structure 66
 classroom-based teaching 328
 CLEO 267
 climate 16
 CML (computer-manager learning) 11
 cognition 185, 276
 cognitive architecture 191
 cognitive constraints ix

cognitive equilibrium 344
 cognitive load 186, 191
 Cognitive Load Theory 146, 147, 191
 cognitive skill acquisition 221
 cognitive strategies 221, 228
 cognitive style 216
 cognitive style construct 215
 cognitive theory of multimedia learning 197
 cognitive tools 120
 cognitivism ix
 Cogniware 238
 coherence principle ix, 14, 203
 collaborative group learning 62
 collaborative learning 62, 75, 102, 160, 220, 309
 comments 80
 computational packages 295
 computational processing 328
 computer literacy 27
 computer-assisted instruction (CAI) 293
 computer-based communication 196
 computer-based training (CBT) 57
 computer-mediated communication (CMC) 2
 computer-mediated communications 178
 computer-technology-related questionnaires 394
 computers and communication technology 48
 conditions-of-the-learner 217
 constructivism ix, 118, 343
 constructivist approach 118
 constructivist learning theory 309
 content management systems (CMS) 308
 content provider vi
 context variation 219
 context-mediated environment 219
 contextual learning 102
 contiguity principle x, 205
 "contribution of resource" 257
 Cooledit 383
 cooperative group learning 62

cooperative learning 62, 160, 309
 cost 17
 course data CD 390
 course management system (CMS) 64
 creativity 295
 critical thinking 309
 cultural adjustments 83
 culture 75
 curriculum design 33
 cyber-literacy 172

D

Dearing Committee 307
 defining multimedia 2
 delivery 76
 delivery mechanisms 76
 DELTA 267
 DELYS 129
 DEOS-L listserv 166
 Design for Multimedia in Learning (DML) ix, 160
 development framework 33
 development strategy 78
 dialogue 174
 didactic contract 129
 didactic economy 123
 didactic problématique 115
 didactic situation 130
 didactic use 117
 digital repositories 251
 Digital Repositories Interoperability (DRI) 265
 directive 80, 87
 Disability Discrimination Act 230
 discursive environment 309
 distributed cognition 233
 documentation node 87
 dual channel assumption 197
 dual coding 186
 Dual Coding Theory 146, 148, 188
 dual store model 186

E

e-examples 126
 e-learning 57, 214

e-Learning Objects Brokerage System 252
 e-learning ontology 217
 educational design 273
 educational games 291
 educational multimedia technologies 28
 educational software 114
 educational software development methods 116
 educational television 48
 educator development activities 33
 electronic data archives 322
 embedded collaborative systems (ECS) 306, 308
 EML 268
 engineering education x, 289
 epistemological faithfulness 122
 ergonomics 215
 exclusivity 230
 experiential learning ix, 102, 103, 328
 experiential learning environments 101
 expression 109
 extraneous cognitive load 192

F

feedback 12
 Finnish 85
 flexible learning models 225
 fluid mechanics simulator 296
 frequency of interaction 79
 functional ACT-R model 186

G

generalized script "comment" 87
 Geneva Script Editor 86
 GEOMLAND 127
 germane cognitive load 193
 global education 78
 graphic designer vi
 graphical modality 239
 graphical user interface (GUI) 116
 graphics and color 4

H

head-loss 296

hermeneutic 110
 higher-order learning 4
 HIV 273
 human activity system (HAS) 50
 human memory 186
 human-computer interaction (HCI) 214
 human-task interaction 50
 HyperCard 272
 hypermedia 5, 344
 hypertext-enabled learning narratives 169

I

IDEAL 77, 86
 image rendering 328
 immersion 109
 IMS 266
 IMS DRI 266
 independence 188
 independent learning 62
 individual construction 276
 individual differences principle 14
 individual learning 62
 individualization 75, 79, 80
 information and communication technology (ICT) 47, 114, 307, 352
 information literacy 172
 information-processing 186
 initial scripting 83
 instruction 185
 instructional characteristics 216
 instructional conditions 226, 227
 instructional design (ID) 136, 216, 284
 instructional designer vi, 13, 138
 instructional media 215
 instructional strategies 236
 instructional technology 185, 308
 intellectual skill 221, 228
 intellectual skill development 221
 intelligent tutorial systems (ITS) 293
 interaction 12, 215, 280, 295
 interactive electronic communities 48
 interactive feedback tools xi, 377
 interactive learning 289
 interactive learning modules (ILM) 63
 interactive multimedia 271

interactivity 4
interdependence 163, 188
Internet 11
intonation 388
intrinsic cognitive load 192
Irvine-Geneva development strategy
viii, 74
ISDN 279

J

Japanese 85
Java language 93
JISC 266
jouissance 170

K

kinesthetic 136
know-how 228
knowledge construction 13
knowledge management infrastructure
57
“knowledge spaces” 35
knowledge transfer 221
knowledge worker 48

L

language learning 377
languages 75
learner-centered approach 196
learning 61
learning and performing 49
learning communities 276
learning design 355
learning environments 27
learning experience 328
learning management systems (LMS)
214
“learning object” 250
learning object databases 322
Learning Objects Network, Inc. (LON)
266
learning outcomes 6, 178
learning performance 61
learning styles ix, 11, 136
limited-capacity assumption 197

linguistic literacy 172
Logo 291
long-term memory 187

M

Mandarin 378
Mandarin Chinese 85
mastery 75
MathGoodies 250
Mayer’s model 13
measurable instructional outcomes 227
media characteristics 3, 6
melody 388
memory load 191
MENO-project 102
messages 84
metacognitive strategy 193
metaknowledge processing model 214,
227
method of delivery 216
methods 216
mindtools 115, 119
“mixed-mode” approach 27
mnemonic strategies 236
modality principle ix, 14, 201
model of learning 159, 160
momentum transport 299
motivation 75, 295
motor skills 228, 229
multicultural designs 82
multidimensional construct 191
multimedia 2, 84, 196
multimedia authoring tools 311
multimedia courseware 214
multimedia developer vi
multimedia educational environment
160
multimedia in cartography x, 306
multimedia in dental and health science
x
multimedia learning 1, 199
multimedia learning environment (MLE)
63, 136
multimedia learning model 160
multimedia literacy ix
multimedia pedagogy 190

multimedia principle ix, 12, 14, 199
 multimedia production 278
 multimedia system for learning science
 x
 multimedia technology 26, 29
 multiple literacy 141
 multiple representation ix, 128, 143
 music 4

N

narrative 101, 102, 109, 277
 narrative in educational media 104
 narrative learning processes 110
 narrative multimedia environments 101
 narrative multimedia learning 106
 narrative universes of children 105
 navigation 370
 NISO standard 266
 nonverbal system 188
 notational transfer 221

O

object of learning 124
 object-oriented programming (OOP)
 292
 objectification 126
 OLIVE 266
 one-to-one interviews 394
 one-to-one oral tests 393
 online modules 354
 "online payment" 257
 ontology 215
 open and distance learning (ODL) 2
 open environments 120
 open microworlds 115, 121
 organizational issues 16
 outcomes 217

P

Pap test 360
 participatory content design 105
 pedagogical basis 28
 pedagogical design 78
 peer-to-peer (P2P) based approaches
 252

people subsystem 50
 performance support systems 49
 performance-centered design viii, 49
 pervasive narrative experience 107
 pictorial thinkers 219
 planning for multimedia viii, 16
 play environment 276, 278
 player's identity 278
 power of expression 119
 principle of cognitive economy 236
 problem-based learning (PBL) 64, 352
 procedural knowledge 228
 ProgramLive 62
 programming languages 291
 project elaboration 294
 projection systems 330
 pronunciation 378

Q

QuickTime 279

R

radio 48
 radiographs 365
 realism 277
 redundancy principle ix, 14, 202
 referential processing 190
 reflection 110
 reflective practice 32, 38
 representational processing 190
 research 109
 "reservation of resources." 256
 "resource delivery" 257
 resource reservation 259
 retention 13
 rote learning 13

S

San Marcos Script Editor 89
 scaffold efficacy 171
 scaffolding 163, 365
 SchoolNet 250
 Schools Online Curriculum Content
 Initiative (SOCCI) 230
 scientific visualization 328

Scottish 85
 screens 331
 script editing online 77
 script notation 80
 segmentation principle x, 206
 self-assessment 294
 self-directed learning (SDL) 351, 352
 self-scripted video 393
 sensitive examination technique (SET) 353
 sensory memory 187
 sensory modalities 61
 shared cultural environment 108
 short-term memory 187
 signaling principle x, 204
 simulations 84, 291
 Singapore Science Center 333
 situated activity 276
 situated learning and cognition 276
 software packages 292
 sound 4
 sound systems 331
 spatial contiguity principle 14
 spatially contiguous 206
 speech analysis tools 383
 speech tool 390
 Sptool 383
 stereo emitters 331
 stereo glasses 330
 storytellers 102
 storytelling 108
 structure 174
 student autonomy 162
 student learning 80
 student responses 85
 student-centered discussion (SCD) 64
 student-centered learning 310, 354
 subgraph 87
 subject portals 322
 supercomputer 331
 symmetrical possibility 129
 synthetic speech 4
 system of learning software development 74
 systems theory 310

T

tactual 136
 task subsystem 50
 teaching conditions 6
 Teaching Integrated Learning Environment (TILE) 63
 teaching noise 123
 teaching situation 121
 technological literacy 172
 "technology infusion" 29
 technology integration 30
 Tell-Me-More series 384
 temporal contiguity principle 14
 text analysis 92
 text-handling algorithms 91
 textual modality 238
 textual representations 129
 Theory of Transactional Distance 158
 thinking skills 159
 tool logic 115, 122
 tool subsystem 50
 TopClass 352
 tracking sensors 330
 traditional learning environments 29
 traditional pedagogical environments 328
 transactional distance 162
 translation process 91
 translator 85
 transportable software 77
 tutorial software 117
 tutoring design 74

U

unified modeling language (UML) 268
 universal networking language 97
 University of Geneva 77
 UNIX-based interactive system 77
 user interaction 26
 user tests 281

V

verbal information 221, 228, 229
 verbal representations 13
 verbal system 188

- verbal-thinking 219
- verbo-tonal system 384
- verbo-tonalism 385
- video 5
- virtual classroom 55
- virtual dental clinic 369
- virtual education vi
- virtual environment 328
- virtual pediatric diabetic patient 359
- virtual reality 27, 328
- virtual university 55
- visual representations ix
- visual thinking 140
- visualization 139
- voice modality 239

W

- wand 330
- Web Access Initiative (WAI) 230
- Web-based educational systems (WBESs) 214
- Web-based multimedia viii
- Web-based training 55
- WebCT 308
- WebCT software 293
- "window period" 277
- working memory 148, 186
- working memory model 186
- World Wide Web (WWW) 252
- written examination tests 393

X

- XML 262