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
androgogy 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
Cogware 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
Index

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

Copyright © 2005, Idea Group Inc. Copying or distributing in print or electronic forms without written
permission of Idea Group Inc. is prohibited.
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
MENTO-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