

Index

A

ADDIE Model 136, 138
 agent based laboratory 103–121
 analysis phase 137
 architectural design 105, 106, 112, 120
 assessment 126, 128, 130, 131
 asynchronous classrooms 269–282
 asynchronous discussion 266, 267, 331, 350
 asynchronous text meetings 226

B

behaviorism 152, 153–154, 157
 blogs 234–258, 259
 Bloom's At-A-Glance 305, 306, 307, 308, 309, 311, 330
 Bruner's Three-Form Theory 155
 business law 76–93

C

Chemical Reaction Model (CRM) 103, 105
 cognitive flexibility theory 157, 161
 cognitivism 153, 155–156, 157–158
 collaboration 235, 236, 237, 238, 239, 242, 244, 246, 248, 249, 251, 252, 253
 collaborative activity 283–302
 collaborative peer tutoring xii, 185, 186, 187, 189, 194, 196, 197, 199, 332
 collective learning 223, 230
 comparison of e-learning outcomes 50–52
 computer-supported collaborative learning (CSCL) 47
 computer science 2, 13, 332
 constructivist, distributed learning environment (CoDE) 47

constructivist e-learning environment (CEE) ix, 45, 46, 47–48, 50, 54
 constructivist e-learning system (CES) 45–58
 constructivist learning 62, 235, 236, 251, 258, 350
 control agent 117
 control dimension 272
 conversational technologies 235, 236, 237, 251, 253
 cooperative learning theory 156–157
 course design 81
 course management system 29

D

data flow diagram (DFD) 94–102
 design phase 137
 development phase 137
 dialogue competence 219, 220, 221, 223–224, 227, 228, 230, 231
 didactical actor 63–65
 didactical agency 59–75
 didactics 59–75
 differentiating qualities 224, 229
 digital portfolios 209
 direct instruction 157
 discussion 219, 221, 223, 225
 discussion forums xiv, 259, 260, 261, 266, 331
 distance education 142, 144, 145, 148, 149, 150, 260
 distance learning 15–28
 distance training 144, 150, 350
 divergent thinking 308, 309
 dual-coding theory 160

E

e-learning 59–75
 e-meetings 224, 227, 230

Index

e-pedagogy 76–93
effectiveness-breadth 264, 265
effectiveness-depth 264
effective questioning 303–312
elaboration theory 157, 160
Electronic Classroom of Tomorrow (ECOT) 143,
144, 145, 146, 148, 149, 332
electronic portfolios 209
enhancing Missouri’s Instructional Networked Teach-
ing Strategies (eMINTS) 289, 297
Estonia 29–44
European Enhancement of Early Years Management
Skills (EEEYMS) 67, 68, 69, 71
evaluation phase 138

F

face-to-face instruction 313–323
facilitating online learning 303–312

G

Gagne’s Conditions of Learning 157–158, 161
gender 15–28, 60, 61, 62, 63, 64, 65, 66, 68, 75
gender communication style differences 17–18
group dynamics 293
group work 70–71, 127–128

H

humanism 156–157, 158–159
hybrid e-learning 269–282

I

I.Q. – I QUESTION 305, 306, 308, 309
I.Q. – I Question a Picture 309, 310
implementation phase 137
information agents 115–116
information and communication technology (ICT)
30, 32, 39
information systems (IS) 30, 31, 32, 33, 34, 38, 39,
40, 42, 335, 352
initiative 262, 264, 265
instant messaging 236, 238, 239, 252, 253
instructor points 265
integrating qualities 228
Interactive Lesson 135–141
interactive lesson 135
interface agents 115
intersubjectivity 283–302
interteaching 189–190
iQ Academies (iQ) 143, 144, 145, 148, 149, 339

J

Java™ vi–vii, xii–xvi, 185–203
java program 187–188
java tutor 187–188, 189

K

knowledge management 122, 123, 128, 132, 133,
147, 236, 247, 248, 253, 340

L

lab interface 112–113
learning community 144, 319
learning design 46, 56, 341
learning dialogues 221, 223, 224
learning ePortfolio 206
learning management systems (LMS) 259, 260, 261,
262, 263, 266
learning outcomes ix–xvi, 45–58
learning processes 222–223
legal environment of business 77

M

maintenance agent 117
managing instructional tactics vi–vii, xii–xvi,
185–203
master control agent 116–117
mastery learning 154
media, and women in technology 1–14
media strategy 3–6
Merrill’s Instructional Theory 158, 160
message passing interface (MPI) 109, 112, 113, 115,
117, 118
methodologies 94, 95, 96, 97, 98
Moore’s Theory of Transactional Distance 155–156,
160
multi-agent systems 104, 106
multi-agent system simulation 115–120

N

National Educational Technology Standards (NETS)
168, 183, 346
New York colleges and universities 204–218

O

online class, and organization 316
online course discussions 18–19
online information security 319
online instruction 313–323

online instructors 151–165
 online learning 235, 244, 252
 online versus traditional instructional issues 77–78

P

parallel learning processes 222, 228
 partial least squares (PLS) 29, 36, 37, 38, 39
 participation vi, xiv, 259, 262, 264, 265
 pedagogy 126, 132
 phenomenal field theory 158–159
 podcasting 259
 podcasts 234–258
 PowerPoint presentations 135–141, 166–184
 problem based learning 68, 72
 programmed instruction xii, 185, 186, 196, 197, 198, 199, 332

Q

qualitative and subjective forum assessment 262–263
 quantitative and objective forum assessment 261–262

R

research model 34, 37
 resistance and disagreement 283, 286, 292, 296
 Roberta—girls conquer robotics 59, 60
 Robert Morris University (RMU) 77, 80, 91
 robotics 59, 60, 61, 62, 63, 65

S

science, technology, engineering, and mathematics (STEM) 1, 2, 3, 5, 6, 7, 8, 10, 11, 12
 self-actualization theory 159
 showcase ePortfolio 206
 social-cultural model of learning 153–154
 sociolinguistics 16, 17, 18, 19, 23, 25, 335
 software self-efficacy xiii, 185, 186, 188, 189, 193, 194, 195, 198, 332
 staff development efforts 144
 staff training 142–150
 structural equation modeling 29, 36
 structured ePortfolio 206
 student attitudes 166–184
 student information agent 117–120
 student Web portfolios 204–218
 student websites 209
 style 265
 synchronous e-learning 269–282

synchronous technology 275
 synchronous text meetings 226
 systems analysis 94, 95, 97, 99, 335

T

teaching 94
 team behavior 129–130
 team competency principles xi–xvi, 122–134
 team mindset 128–129
 team work 128, 131
 technological aids 166, 169, 182
 technology, women in 1–14
 technology acceptance model (TAM) 29–44
 technology survey 166, 171
 temporary suspension 283, 286, 288, 291, 292, 296
 theory of immediacy and social presence 156
 theory of multiple representations 155, 160
 threaded discussions 15–28
 time dimension 271
 timeliness 264
 traditional classrooms 269–282

U

undergraduate education 104
 use cases 94–102

V

value 264, 265
 video-casting 259
 video or talking head pane 276
 virtual high schools 142–150
 Virtual I.D.E.A.L. (IDEAL) 145, 146, 147, 148, 149
 virtual learning environments (VLEs) 270, 272, 273, 281

W

WebCT 29–44
 Web dialogues 219–233
 weblog 241, 242
 web portfolios 209
 whiteboard and Web-browsing pane 275
 wikis 234–258
 women 1–14

Z

zone of proximal development (ZPD) 285, 286, 287, 295