Index

A

activity theory 144
agency 121, 122, 126, 129, 133, 134, 136, 137, 138, 139, 140, 142, 144, 145, 146
agency, Popperian 140
aha! Process Classroom SIMs 249, 250, 251, 255, 261, 262, 263, 267, 268, 256, 270
Ajax3D 176, 177, 178, 179, 180, 183, 187, 488
Alice
  Storytelling Alice xv
Alice, Generic
  375, 376
Alice, Storytelling 481
  368, 369, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380
alternate reality game (ARG) 351, 352, 353, 354, 356, 358, 359, 360, 361, 362, 363 365, 485
animated movies xv, 368, 371
application, low threshold (LTA) 54, 59, 60, 61, 67
Ardcalloch 104, 105, 108, 109, 114
assessment 146, 147, 150
assessment, attribution of 148
assessment, audience 147
assessment, conceptual framework of 149
assessment, data relevance of 148
assessment, embedded 159, 163, 165, 169, 170, 481, 500
assessment, formative 157, 159, 160, 161, 165, 210, 215, 222, 362
assessment, reflexive 145
assessment, student model for 149
augmented reality (AR) games 317, 319, 321, 323
Aurora Toolkit 409, 412, 414, 419
authenticity 53, 58, 106, 195, 260, 314, 335

B

big five theory of psychology, the 119, 125, 126, 127, 128, 129, 130, 131, 132, 145, 150, 152, 153, 473, 476
Bioware Inc. 409, 412, 419
Black and White(TM) 317, 320, 326, 329, 465
Black and White II(TM) 326, 329, 465

C

capstone learning experience 338, 351, 356, 357, 358, 360, 362
classifier systems 141
cognition, distribution of 311
cognition, situated 364, 469
cognitive apprenticeship 291, 381, 382, 383, 384, 385, 386, 388, 389, 390, 392, 46 8, 479
cognitive models 120, 121, 122, 123, 125, 126, 136, 137, 140, 141, 147, 150
cognitive models, evolutionary 136
cognitive models, hierarchical temporal 147
cognitive models, left-right brain architecture 137
cognitive models, OCC model of emotions 129
commercial off the shelf (COTS) 4
communities 145, 146
communities of practice (CoP) 76, 77, 78, 79, 80, 81, 106, 121, 123, 311, 321, 323, 324, 327, 329, 338, 464

Copyright © 2009, IGI Global, distributing in print or electronic forms without written permission of IGI Global is prohibited.

Complex systems xvii
complex systems 95, 109, 151, 339, 369, 452, 453, 454, 455, 456, 460, 461, 464
computer games 17, 30, 89, 287, 365, 487, 491
computer programming 481
  368, 369, 370, 371, 376, 380
computer science 369, 370
connecting teaching and learning alignment 210, 220
Cook School District Simulation xii, 208, 211, 213, 216, 217, 218, 219, 223

D

debriefing tools 305
decision-making 27, 28, 42, 45, 106, 127, 1 43, 149, 162, 164, 191, 209, 215, 28 9, 290, 291, 292, 296, 297, 298, 300, 303, 305, 307, 312, 314, 353, 366, 394, 395, 460, 500
decomposition 373
defense modeling and simulation office (DMSO) 6, 15, 21, 474
Deus Ex(TM) 317, 321, 330, 471
development process for teaching simulations (DPTS) 294, 295
DiGRA 17, 423, 424, 425, 468, 489, 501

E

e-Learning 20, 47, 115, 180, 181, 184, 186, 187, 171, 242, 406, 462, 470, 478, 485
edutainment 21, 473
emancipatory interest, the 283
emergence 209, 330, 356, 391, 392, 399, 453, 456, 459, 460, 479
emergence, initial conditions of 453
emergence, interactions 456, 457, 458, 459
ethical sensitivity 188, 193, 194, 195, 196, 203, 205, 465, 466, 495
event list 9, 13
Everquest(TM) 6, 20

F

Fable(TM) 317, 320, 326, 330, 473
Fable II(TM) 326
Feedback loops 453, 454, 459
  positive 454
fidelity 5, 6, 15, 33, 116, 203, 228, 230, 260, 304, 327, 474
film festival 377, 378

G

game developer postmortem 411
game development kit (GDK) 409, 410, 412, 413, 414, 415, 418, 419, 422
game modification (modding) 364, 408, 409, 410, 411, 412, 413, 414, 419, 473
games 3–26, 30–67, 85–99, 106, 113, 119, 121, 126, 132, 133, 136, 140–169, 188–199, 200–294, 307–333, 351, 352, 353, 354, 355, 356, 358, 359, 360, 362, 363, 364, 365, 366, 367, 392, 394, 395, 396, 397, 398, 399, 400–449, 463, 465, 466, 467, 472, 473, 476, 480–497, 500, 501
games design 139, 140
Global Village Playground 356, 357

H

Habermas' theory of communicative action 275, 276, 278, 287, 477
haptics 128, 188, 192, 241, 457
hermeneutics 286, 465
How People Learn 119, 120, 121, 129, 134, 143, 144, 151, 156
How People Learn framework 120, 121, 122, 134, 143, 144, 146
hybridity 107, 108, 117, 477

I

immediacy 56, 57, 58, 111, 231
innovative technology experiences for students and teachers (ITEST) 337, 346, 349
instructional design 20, 33, 55, 88, 90, 97, 98, 99, 100, 116, 120, 121, 243, 251, 273, 330, 338, 354, 357, 366, 419, 467, 470, 472, 479, 480, 481, 497, 500
instructional management systems learning design (IMS LD) 110, 113, 114
instructional system design (ISD) 87, 88, 89, 93
interactivity 26, 51, 95, 98, 102, 160, 161, 168, 202, 390
interarrival time 9, 13

J

JavaScript 177, 178, 179, 180, 183
Joint Information Systems Committee (JISC) 108, 116, 467

K

knowledge 136, 140, 142
knowledge, content 123
knowledge, cultural 137
knowledge, declarative 135, 147
knowledge, expert 126
knowledge, nature of 133, 140, 144
knowledge, Popperian 136
knowledge, remembering 141
knowledge, representation of 140
knowledge, simulation of 137
knowledge, tacit 135
knowledge acquisition 132, 133, 134, 136, 139
knowledge acquisition equals structure 140, 142
knowledge as reflection 133
Krucible 25, 38, 40

L

learner characteristics 120, 122
learning, case-based 102, 188, 190, 192
learning, design based (DBL) 355
learning, discovery 29, 31, 35, 36, 46, 51, 470
learning, experiential 16, 26, 29, 31, 35, 43, 63, 189, 254, 279, 428
learning, individualized 28, 391
learning, problem-based (PBL) 63, 190, 191, 334, 337, 338, 345, 346, 347, 349, 366, 500
learning, self-directed 26, 36, 335
learning by doing 26, 43, 392, 395, 485
learning environments 27, 38, 42, 43, 44, 45, 52, 57, 78, 109, 122, 143, 146, 158, 159, 160, 161, 168, 228, 229, 230, 61, 241, 236, 289, 290, 291, 293, 303, 307, 309, 322, 325, 329, 366, 369, 371, 375, 379, 382, 383, 384, 392, 398, 428, 429, 443, 479, 496, 500
learning environments, effective 157, 158, 160, 168, 391
learning environments, simulated 382, 384
learning sciences 308, 310, 316, 318, 327, 329, 330, 464, 474, 480

M

Mage: The Awakening (TM) 282
massively multiplayer online games (MMOGs) 59, 115, 116, 205, 310, 316, 323, 324, 333, 472
Max Trax 25, 38, 39
memory 455
models 119, 120, 121, 122, 123, 125, 126, 127, 128, 129, 130, 131, 132, 134, 136, 137, 139, 140, 142, 143, 144, 145, 146, 147, 148, 149, 150, 152, 154, 155, 468, 472, 473, 489, 495
models, agent 468
119, 120, 121, 122, 123, 126, 127, 129, 130, 131, 132, 133, 134, 13 6, 137, 139, 140, 142, 143, 144, 145, 146, 149, 150, 152
models, analysis, design, development, implementation, and evaluation (ADDIE) 88, 90, 105, 121, 419
models, circumplex 143
models, computational 467
119, 120, 145, 150, 151, 156
models, conceptual 31, 294, 298, 386
models, environment
119, 120, 121, 122, 127, 128, 129, 130, 131, 133, 137, 140, 142, 143, 144, 145, 146, 147, 148, 149, 150
models, learner 462, 467, 468, 473, 478, 479, 480, 481, 483, 489
120, 121, 122, 123, 125, 126, 127, 128, 129, 131, 132, 133, 135, 138, 140, 142, 143, 145, 146, 147, 149, 150, 151, 152, 153, 154, 155
models, operational 294
models, physical 128, 129, 145, 150
models, predator-prey 15
models, simulation 35, 236

multiple intelligences (MI) 298
musical notation 112

N

narrative event diagram (NED) 102, 109, 111, 112, 113, 114
nested relationships 455, 456, 458
nested relationships network 455
Neverwinter Nights(TM) (NWN) 409, 411, 412, 413, 414, 418, 419, 420, 422, 426
non-player character (NPC) 111, 112, 325, 415, 422
nonlinearity 454, 455, 457, 458, 459, 461
nonlinearity behavior 457
nonlinearity transitions 454, 455, 459

O

online digital simulation, three dimensional (3D) 381, 384
online space, three dimensional (3D) 62, 63, 64, 67
open-ended problem solving 368, 369, 371, 376, 379
openness 454, 455, 458, 459
open vs. closed system 454, 455

P

paradigms 284, 286
phenomenology 284
problem space 133, 137, 149
Programming
  computer programming xv
  programming environment xv
programming environment 368, 369, 370, 371, 376, 379, 380, 481
psychological models 123, 126, 142, 150

Q

quasi-homomorphisms (Q-homomorphisms) 140
Quest Atlantis (QA) 273, 274, 277, 278, 280, 282, 285, 287, 499, 500
queues 8, 9, 13, 16, 19

R

Reliving the Revolution(TM) (RtR) 319, 320, 322, 324, 325
role-play 3, 30, 102, 103, 190, 288, 273, 275, 278, 279, 280, 283, 288, 323

S

Saving Adryanee (Neverwinter Nights(TM) mod) 411, 415, 416, 417, 418, 421, 422, 426
Second Life(TM) 23, 27, 28, 59, 60, 63, 285, 286, 317, 322, 323, 329, 354, 359, 383, 389, 391, 428, 432, 433, 436, 441, 443, 445, 446, 448, 450, 463, 465, 467
serious games 411, 414, 415, 416, 420, 421, 422, 426
Serious Games Showcase & Challenge (SGS&C) 411, 415, 416, 419
service time 8, 13
simClass 25, 38, 42, 51, 227, 228, 233, 237, 238, 239, 240, 242, 289, 290, 289, 290, 291, 293, 295, 296, 297, 298, 299, 300, 301, 302, 307, 468
SIMPLE project 101, 102, 103, 108, 109, 110, 111, 112, 114, 115, 109
SimSchool 126, 134, 153, 306, 457, 458, 459, 460, 476
simuland 6, 15
simulations 119, 120, 121, 122, 123, 129, 130, 132, 133, 136, 139, 140, 142, 145, 146, 147, 148, 149, 152, 473
simulations, digital 2, 4, 5, 7, 15, 25, 26, 28, 29, 30, 34, 38, 43, 119, 121, 230, 274, 381, 384
simulations, experiential 30, 38, 230
simulations, physical 403
simulations, situational 300
simulations, teaching 48, 133, 145, 227, 228, 237, 289, 290, 291, 292, 293, 294, 295, 296, 297, 300, 239, 300, 297, 300, 301, 303, 304, 305, 307, 452, 481
simulations, teaching, design principles for 290
simulator training 102
Situated Cognition
  expertise xii
situated cognition 218, 220
situated cognition expertise 208, 217, 218, 222, 223
social commitments 280
social presence 57, 58, 59
Squeak Etoys 334, 335, 337, 338, 339, 340, 339, 345, 340, 342, 344, 345, 346, 347, 349, 499

Starry Night 25, 38, 41, 50, 496
Star Wars: Knights of the Old Republic(TM) (KORTOR) 317, 332, 409
Star Wars\
Knights of the Old Republic(TM) (KORTOR) 496
storyboard 372, 373, 378
storytelling 369, 371, 375, 376, 380, 481
Strategy CoPilot 25, 38, 39

T

teacher education, pre-service 44, 46, 47, 275, 474, 481
Teacher Work Sampling xii
teacher work sampling (TWS) 208, 209, 210, 211, 216, 217, 218, 220, 223
teaching skills 42, 44, 228, 242, 289, 291, 292, 293, 294, 295, 296, 243, 296, 295, 296, 297, 303, 304, 305, 470, 486, 492, 501
Theoretical Frameworks xi
theoretical frameworks 119, 120, 122, 152, 15 3, 478, 481
theoretical frameworks, assessment of 119, 120 120, 122, 125, 127, 128, 129, 131, 143, 144, 145, 146, 147, 148, 149
theoretical frameworks, Bruner 467 122, 137, 151
theoretical frameworks, Cattell, Horn, Carroll 122, 123, 151, 152, 153
theoretical frameworks, cognitive science 120, 122, 156
theoretical frameworks, community 120, 121, 123, 128, 129, 132, 134, 143, 144, 145, 146, 148, 149, 150, 151, 153, 156
theoretical frameworks, knowledge 119, 120, 121, 122, 123, 124, 125, 126, 127, 128 , 129, 130, 132, 133, 134, 135, 136, 137, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 152, 153, 154, 156
theoretical frameworks, learner 120, 121, 126, 129, 131, 132, 156
trading zone 108, 110
transactional distance 56, 57, 58, 59, 64
twenty first century skills 332, 348, 489, 493

U

UK Centre for Legal Education (UKCLE) 108
user tracking 148

V

virtual environments 27, 28, 30, 59, 62, 154, 173, 317, 355, 429, 433, 444, 446, 447, 449, 487
virtual environments, multi-user (MUVE) 59, 67, 277, 355, 366, 500
virtual laboratories 339
virtual models 230, 340, 342, 343
virtual reality modeling language (VRML) 173, 186, 187, 477
Virtual School 25, 38, 40
virtual worlds 2, 18, 20, 27, 28, 49, 50, 53, 59, 62, 64, 67, 74, 75, 81, 82, 155, 172, 186, 189, 191, 199, 205, 310, 314, 316, 317, 318, 319, 323, 329, 360, 367, 370, 381, 383, 391, 392, 428, 429, 433, 436, 445, 446, 447, 448, 449, 464, 471, 472, 492, 495, 501
Vygotsky 77, 83, 84, 85, 137, 142, 144, 155, 293, 307, 382, 457, 461, 476, 490, 499

W

World of Warcraft(TM) (WoW) 5, 6, 20, 59, 115, 318, 323, 501

X

X3D format 173, 174, 175, 177, 178, 180, 181, 183, 186, 187, 465

Z

zone of proximal development (ZPD) 293, 298, 457