Index

21st century skills 20, 99-100, 114, 144, 205, 299-300, 309-310, 314, 316, 321-322, 324

A

Abu Dhabi 17-19, 21, 23-26
adaptive educational system 346
alphabetical sounds 81-82, 84, 86
analytics 65, 67, 95, 120, 189, 194, 201, 204-205, 207, 214-216, 218, 233-234, 299, 347, 349, 360
applications 3, 37, 42, 81, 84, 87, 118-119, 121-125, 138, 143, 146, 169, 193, 204-205, 208, 213-214, 228, 231-232, 237, 244-245, 248, 257, 262, 315, 331, 334, 340, 348, 357
Appreciative Inquiry 45-46, 50, 54, 57, 59, 62
attitude 13, 36, 47, 51, 53, 55-57, 62, 104, 185, 247, 322

B

BioLoid 244-245, 248
Blackboard Learn 259, 262, 265
blended learning 23-25, 47, 62, 189, 256, 258-262, 265, 270, 273, 285

C

climate change 1-2, 7-8, 12-14
cloud web services 332, 341
Cognitive Architecture 127, 331, 334-335, 341
cooperative learning 310, 333

D

Dewey 260-261
diagnostic tool 63-66, 68, 77
digital media 82, 294, 314-315, 319
Digital production 36, 292
Discovery Bar 284, 286-287, 290-293, 295
disruption 36, 45, 49, 53, 56, 62, 304
Disruptive Learning 299, 313-314

E

education 2-3, 13, 18-21, 23, 26, 34-35, 37, 42, 45-50, 57, 59, 62-68, 70, 74-75, 77, 81-86, 95, 98-100, 102-103, 113-114, 119, 125-127, 129, 134-135, 137-138, 142-145, 151, 164-169, 172-173, 175, 178, 181, 185, 188, 204-205, 212-216, 227-237, 241, 244-245, 247, 256-262, 277, 299-301, 303, 305-307, 310-313, 315-316, 321, 330, 334, 341, 347
Education Information Network 227, 231, 241
educational robotics 17-25, 244-247, 252-253
educational robots 17, 19-22, 25-26, 244, 246-248
educational smart event 165, 175
educational technology 114, 232, 262, 276, 320
e-learning 62, 166-169, 173, 175-176, 208, 210, 213, 229, 233, 261, 305, 331, 334, 360
engagement 5-6, 13, 17, 19, 21, 24-25, 36, 41, 60, 76, 81-83, 86, 146, 156, 198, 201, 204-206, 208, 217, 221, 246, 258, 262, 284-285, 290-291, 293, 296, 306, 339-340, 347, 349, 354
experiential learning 214, 256, 258-262

F

face-to-face 23, 53, 77, 110, 166, 173, 175, 178, 184, 258-259, 263
FATIH Project 227-228, 230, 233-235, 238, 240-241
field trip 1-4, 6-10, 13
flexible 19, 77, 95, 113, 129, 164, 167-168, 173, 176, 185-186, 205, 207, 213, 247, 262, 266, 276, 287, 290-292, 300, 312-313, 351
formal education 134, 233, 300, 305

G

game mechanics 81, 90, 130
gamification 4, 6, 65, 68, 74-75, 83, 85-86, 89, 98, 214, 216
generation Y 256
geoscience 1-2, 13
Glacier 7, 10-12

H

Harvard 49, 284-285, 293-294, 296-297

I

informal education 2, 64, 137
information visualization 347-348, 358
Instruction Room 287, 290-291, 293, 296
intelligent agent 330, 341
intelligent interactive game-based system 81
intelligent system 63, 65, 67, 70, 76
interactive board 151, 228, 231-236, 240

J

joyful learning 256, 258, 272

K

knowledge creation 234, 284, 290, 314, 318
Kolb 260-261

L

learner control 2, 354-355, 357
learner mobility 284, 290-291, 293
learning curve 188-189, 200, 246
learning environments 17, 48, 53, 57, 59-60, 63, 82, 86-87, 100-103, 111, 114, 118-138, 143-146, 148, 188, 190, 198, 207-208, 211, 227-229, 246, 256, 259, 261, 270, 276, 284-285, 292, 346-347, 349, 354, 357
Lesson Planning 142-144, 146-148, 151
life-long-learning 315
LMS 66, 173-175, 181, 188-190, 193-196, 198-201, 209, 257, 296, 340

M

mathematics 3, 18, 21, 46, 51, 55-57, 59, 63-68, 72, 74-77, 99-101, 104, 108-110, 113-114, 244-245, 247, 253, 284, 293, 306, 311, 313, 320
media education 35, 37
media studios 292-294, 296
mindful teaching and learning 256
mobile communication 34
mobile journalism 35-37, 39, 41-42
mobile learning 87, 101, 146, 167, 203-205, 207-219, 221, 240, 257
Moodle 63, 67-68, 70, 169, 175, 188-195, 201

N

network cooperation 169-170, 186
new media 315
new technology 64, 108

P

Pacific 63-65, 68-69, 72, 75-77
peer collaboration 5
portfolio 107, 111, 168, 178, 181-182
preschool 81-86, 88-89, 94-96, 98
preschooler 81, 85-87, 89-91, 93, 95, 98
public libraries 299

R

real-world questions 106
reflection 49, 54, 95, 150, 165, 171, 174-175, 185-186, 207, 211, 259, 264, 272, 347, 351, 354, 356-359
remedial 65-70, 72-77
Resource Sharing 291
roadmap 166, 168, 178, 185-186
robots 17, 19-23, 25-26, 31, 129, 244-248, 250-253, 257

S

schools 17-18, 21, 25-26, 50, 64, 66, 77, 82, 84, 88, 100, 103-104, 113, 142-143, 149, 169, 182, 188, 205, 208, 228, 230-231, 233, 235, 240, 299-300, 303, 305, 313-315, 317-319, 322, 324
self-regulated learning 346, 348, 357-358
situated learning 211, 214, 256, 260

smart education 81-82, 85-86, 98, 100, 113, 166-168, 173, 175, 227, 306-307, 347
smart learning 2, 17-19, 21-26, 35-37, 41-42, 45-49, 53-54, 57, 59-60, 62-64, 66-67, 74-75, 77, 82-89, 95-96, 98-102, 111-112, 114, 118-138, 141, 144, 146, 148, 151, 154, 164-166, 175, 182, 185-186, 188, 193-196, 198-200, 204-205, 207-208, 210, 218, 220-221, 227-230, 233-234, 238-241, 244-245, 253, 256-258, 260-262, 265, 269-271, 284-285, 290, 300, 306, 338, 340-341, 346-347, 349, 357
smart learning environment 2, 19, 21, 25-26, 36, 41, 46-48, 53-54, 57, 59-60, 63-64, 66, 74, 77, 96, 99, 101, 111-112, 114, 118-126, 128-137, 146, 164, 188, 204, 218, 220-221, 227, 229-230, 234, 238, 257-258, 260-262, 269, 271, 284, 306, 338, 340-341, 349
smart learning path 165
smart learning system 17, 87, 102, 229
smart phones 34, 38-39, 41, 67, 151
Smart Preschooler 86, 98
smart research framework 81
smart technology 88, 98, 143, 215, 229
sound articulation 82-89, 93-95, 98
statistics education 47
STEM 3, 13, 17-26, 30-31, 57, 244-247, 253, 311-313
student engagement 6, 13, 21, 24-25, 60, 206, 258
student motivation 74
supervising teacher 166, 170, 185

T

tablets 35-36, 67, 76, 83, 86, 88, 129, 151, 195, 204, 228, 230, 233-234, 236-237, 241
Tanganyika preschool 81, 88-89, 96
teacher education 142-143
teacher professional development 204, 206-208, 213

U

UAE 17-19, 21, 23-26, 38, 100, 203-205, 208-209, 216, 218, 262, 299-303, 305, 313, 318, 320-321, 323
undergraduate 2, 46, 51, 59, 62, 65-66, 165, 169-171, 175, 189, 199-200, 245-247, 285, 293-294, 331, 358
United Arab Emirates 18, 21, 34-35, 100, 203, 205, 208, 215, 218, 256, 258, 262, 299, 301

V

virtual laboratory 330-335, 340
virtual reality 3, 241, 257, 304, 315, 333
Vision 2030 45, 59, 62

Y

Yosemite National Park 1-3, 7-8, 13-14, 128