

# Index

## A

acceptance 111, 112, 113, 114, 116, 118, 119, 181, 188, 192, 208, 213, 253, 284  
accommodations 159, 160, 161, 165, 166, 168, 170, 171, 172, 174, 175  
ADHD 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183  
advantages 3, 14, 17, 23, 24, 26, 28, 29, 30, 35, 40, 41, 42, 43, 49, 57, 61, 63, 105, 112, 114, 117, 118, 124, 187, 189, 191, 192, 193, 194, 195, 208, 212, 230, 241, 281, 282, 289, 290, 303, 305, 309, 311, 313, 317, 318, 328, 329, 347, 350  
AR 1, 2, 3, 7, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 80, 102, 123, 124, 125, 127, 133, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 151, 152, 154, 226, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 299  
Artificial intelligence 1, 19, 24, 43, 44, 45, 47, 48, 49, 50, 51, 52, 53, 57, 59, 60, 61, 64, 65, 67, 68, 69, 70, 71, 72, 77, 78, 80, 81, 108, 111, 112, 117, 120, 121, 133, 157, 158, 160, 161, 171, 174, 187, 201, 215, 217, 218, 220, 221, 226, 228, 230, 236, 240, 241, 243, 244, 250, 254, 255, 256, 265, 266, 267, 268, 269, 270, 271, 272, 281, 283, 290, 293, 302, 303, 308, 309, 311, 312, 313, 318, 332, 333, 334, 335, 336, 337, 338, 339, 350, 359  
assistive technology 157, 158, 160, 168, 171, 174, 178, 179, 183

## C

challenges 1, 2, 3, 14, 15, 17, 18, 21, 23, 24, 28, 35, 36, 38, 40, 41, 43, 44, 47, 53, 56, 62, 63, 64, 65, 69, 70, 71, 72, 73, 80, 103, 105, 111, 112, 113, 114, 115, 117, 118, 119, 120, 121, 123, 125, 133, 137, 142, 144, 145, 147, 149, 161, 162, 164, 165, 166, 168, 169, 171, 172, 173, 174, 176, 195, 207, 208, 210, 212, 213, 214, 217, 218, 219, 220, 221, 222, 227, 228, 229, 232, 233, 234, 235, 236, 237, 238, 240, 241, 242, 243, 244, 246, 265, 266, 268, 277, 281, 282, 286, 287, 292, 293, 295, 296, 303, 307, 308, 309, 310, 311, 313, 327, 329, 332, 333, 335, 336, 338, 339, 349, 350, 353, 354, 355, 357, 358, 360  
chatbots 41, 47, 49, 50, 51, 52, 65, 121, 133, 226, 236, 242, 265, 266, 270, 281, 282, 310, 333, 334, 335, 338  
ChatGPT 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 40, 41, 42, 43, 44, 45, 47, 49, 50, 51, 52, 53, 54, 55, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 121, 241, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 264, 265, 266, 267, 270, 272, 273, 274, 275, 276, 281, 301, 302, 303, 304, 305, 306, 307, 308, 309, 311, 312, 313, 314, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 341, 342, 343, 344, 345, 346, 347, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360  
classroom learning 76, 111, 112, 113, 114, 115, 116, 117, 118, 119, 137  
college students 176, 181, 182, 183, 185, 197, 207, 215, 266, 360  
Creative Writing 63, 301, 302, 303, 304, 307, 308, 309, 314, 316, 317, 318, 319, 320, 321, 322, 323, 324, 326, 327, 328, 329, 330, 336, 337, 339, 341,

342, 343, 344, 345, 346, 347

## D

desktop VR 209

disadvantages 23, 24, 26, 28, 29, 35, 40,  
43, 128, 208, 241, 281, 289, 290, 309,  
311, 317, 318, 347

## E

education 1, 2, 3, 7, 9, 10, 11, 12, 13, 14,  
15, 16, 17, 18, 19, 23, 24, 25, 26, 27,  
28, 29, 31, 32, 33, 34, 37, 38, 39, 40,  
41, 42, 43, 44, 45, 47, 48, 49, 51, 52,  
54, 55, 56, 57, 59, 60, 63, 64, 66, 68,  
69, 70, 71, 72, 73, 75, 76, 77, 83, 89,  
104, 105, 106, 107, 108, 109, 111,  
112, 113, 114, 115, 116, 117, 118,  
119, 120, 121, 123, 124, 125, 126,  
127, 128, 129, 130, 131, 132, 133,  
134, 135, 136, 137, 138, 139, 142,  
144, 145, 146, 147, 148, 149, 150,  
151, 152, 153, 154, 155, 176, 177,  
181, 185, 186, 187, 189, 191, 192,  
193, 194, 195, 196, 198, 200, 201,  
202, 206, 207, 208, 212, 213, 214,  
215, 217, 218, 219, 220, 221, 222,  
223, 225, 226, 227, 229, 236, 237,  
238, 240, 241, 242, 243, 244, 251,  
254, 263, 266, 267, 269, 271, 272,  
273, 277, 278, 279, 280, 281, 282,  
283, 284, 285, 286, 287, 288, 289,  
290, 291, 292, 293, 294, 295, 296,  
297, 298, 299, 302, 304, 305, 308,  
309, 310, 311, 312, 313, 314, 325,  
326, 327, 330, 331, 333, 334, 335,  
336, 337, 338, 339, 359, 360

Educational Paradigms 219, 277, 283, 311

educational technology 26, 43, 105, 120,  
121, 147, 148, 149, 152, 206, 207,  
208, 211, 212, 213, 214, 215, 240,  
241, 242, 243, 266, 298, 331, 334,  
335, 336, 337

Education System 38, 59, 123, 125, 126,  
127, 132, 142, 229, 242, 272

EFL 25, 28, 212, 214, 217, 219, 220, 221,

231, 233, 234, 235, 236, 237, 240,  
241, 242, 244, 245, 246, 304, 307, 331

English speaking education 187, 200,  
201, 206

ethical 14, 23, 24, 25, 26, 36, 37, 39, 40,  
42, 47, 49, 59, 61, 64, 69, 112, 113,  
120, 189, 210, 211, 227, 244, 277,  
283, 286, 287, 293, 296, 299, 307,  
313, 314, 328, 335, 336, 338, 349,  
350, 351, 352, 353, 354, 355, 356,  
357, 358, 360

executive functioning 157, 158, 159, 160,  
161, 162, 163, 164, 165, 166, 167, 168,  
169, 170, 172, 174, 175, 177, 180, 181

## I

immersive experience 17, 139, 149, 150,  
186, 188, 193, 205, 206

Immersive Technologies 125, 148, 277,  
278, 279, 280, 281, 282, 283, 284, 285,  
286, 287, 288, 293, 296, 297, 298, 299

Immersive VR 185, 186, 187, 188, 189,  
190, 191, 192, 193, 194, 195, 196, 197,  
198, 200, 201, 203, 204, 205, 206, 207,  
208, 209, 210, 211, 214

instructional technology 111, 114

Intelligent Model 95

interview 44, 71, 111, 114, 317, 334, 347

## K

Kids 56, 75, 81, 82, 83, 88, 89, 90, 104,  
105, 107, 108, 109, 126, 128, 181, 290

## L

Language Learning 33, 45, 58, 132, 134,  
152, 154, 187, 193, 194, 196, 200,  
207, 213, 214, 218, 221, 222, 223,  
226, 230, 240, 241, 242, 243, 244,  
310, 331, 332

learning 1, 2, 3, 10, 11, 12, 13, 14, 15, 16,  
17, 18, 19, 20, 23, 24, 26, 27, 28, 29,  
31, 32, 33, 34, 36, 37, 38, 39, 40, 41,  
42, 43, 44, 45, 48, 49, 50, 52, 54, 55,  
56, 57, 58, 59, 60, 61, 62, 65, 66, 67,

68, 69, 70, 71, 72, 73, 75, 76, 77, 78,  
80, 81, 82, 83, 88, 89, 94, 95, 96, 97,  
98, 102, 103, 104, 105, 106, 107, 108,  
109, 111, 112, 113, 114, 115, 116, 117,  
118, 119, 120, 121, 123, 124, 125,  
126, 127, 128, 129, 130, 131, 132,  
133, 134, 135, 136, 137, 138, 139,  
140, 141, 142, 144, 145, 146, 147,  
148, 149, 150, 151, 152, 153, 154,  
155, 158, 160, 161, 163, 168, 170,  
171, 173, 176, 177, 178, 181, 185,  
186, 187, 190, 191, 192, 193, 194,  
195, 196, 197, 198, 200, 201, 202,  
203, 204, 205, 206, 207, 208, 209,  
210, 212, 213, 214, 215, 217, 218,  
219, 220, 221, 222, 223, 224, 225,  
226, 227, 228, 229, 230, 231, 233,  
234, 235, 236, 237, 238, 240, 241,  
242, 243, 244, 246, 252, 253, 256,  
265, 266, 270, 271, 273, 274, 275,  
277, 278, 279, 280, 281, 282, 283,  
284, 285, 286, 287, 288, 289, 290,  
291, 292, 293, 294, 295, 296, 298,  
299, 302, 303, 304, 305, 306, 308,  
309, 310, 311, 312, 313, 315, 317,  
318, 325, 326, 327, 328, 329, 330,  
331, 332, 333, 334, 335, 336, 337,  
338, 339, 341, 343, 344, 346, 347, 359  
Library and Information Science 349, 350,  
351, 352, 353, 355, 356, 357, 358  
LLM 250, 251, 252, 253, 254, 255, 256,  
257, 258, 261, 262, 263, 273, 274, 275

## M

Machine Learning 31, 34, 48, 50, 61, 71,  
81, 82, 88, 89, 95, 102, 103, 104, 108,  
121, 133, 226, 228, 243, 266, 271, 273,  
275, 304, 359  
Mobile Application 75, 81, 84, 85, 86,  
102, 104  
Music Education 1, 2, 3, 7, 9, 10, 11, 12,  
13, 14, 15, 16, 17, 18, 19

## O

organization 65, 84, 158, 160, 164, 165,  
166, 174, 179, 181, 183, 200, 350,  
352, 358

## P

Palestinian Universities 301, 308, 309,  
316, 317, 321, 322, 323, 324, 325,  
328, 329, 330, 339, 341, 344  
Personalized learning 31, 41, 58, 76, 77,  
78, 80, 83, 89, 106, 109, 112, 113, 120,  
155, 203, 206, 207, 217, 221, 227, 286,  
287, 309, 310, 311, 312  
Perspectives 57, 61, 66, 69, 70, 71, 111,  
113, 150, 201, 206, 207, 208, 217,  
222, 223, 231, 232, 233, 234, 235,  
236, 237, 240, 241, 243, 245, 266,  
299, 301, 302, 308, 309, 313, 317,  
320, 321, 322, 323, 324, 326, 327,  
328, 330, 333, 335, 337, 341, 344, 352  
Postgraduate Students 301, 308, 309, 314,  
316, 317, 319, 320, 321, 322, 323,  
324, 325, 326, 327, 328, 329, 330,  
340, 341, 344, 347  
Potentials 45, 280, 349  
preliminary study 105, 111, 112, 212  
Professional Development 113, 129, 144,  
154, 211, 227, 229, 294, 295, 296, 299

## R

Research 1, 2, 3, 4, 7, 9, 10, 11, 12, 13,  
14, 15, 16, 17, 18, 21, 23, 24, 26, 27,  
28, 29, 32, 34, 39, 40, 41, 43, 44, 47,  
49, 52, 53, 58, 66, 68, 71, 73, 80, 82,  
83, 85, 86, 87, 89, 105, 107, 108, 109,  
111, 112, 113, 115, 118, 120, 121,  
124, 125, 140, 147, 148, 149, 151,  
153, 154, 155, 157, 158, 160, 161,  
162, 163, 164, 169, 170, 176, 178,  
180, 186, 187, 188, 189, 191, 193,  
195, 196, 200, 201, 202, 203, 205,  
207, 208, 209, 210, 212, 213, 214,  
215, 218, 219, 221, 222, 223, 228,  
230, 231, 232, 233, 234, 235, 236,

237, 240, 242, 243, 245, 254, 266,  
267, 270, 273, 282, 283, 284, 286,  
287, 291, 292, 297, 298, 299, 301,  
302, 305, 306, 307, 308, 309, 312,  
314, 317, 325, 327, 328, 330, 331,  
332, 333, 334, 336, 337, 338, 339,  
342, 345, 349, 350, 351, 352, 353,  
354, 355, 356, 357, 358, 359, 360, 361  
ResNet 94, 95, 96, 104

## S

self-regulation 77, 118, 159, 161, 162,  
163, 164, 174, 177, 178, 181, 182, 201  
students 2, 13, 14, 15, 16, 17, 23, 24, 26,  
27, 28, 29, 31, 32, 33, 34, 35, 36, 37,  
38, 39, 40, 41, 42, 43, 47, 49, 50, 51,  
54, 55, 56, 57, 58, 59, 60, 61, 63, 65,  
66, 67, 69, 73, 76, 77, 78, 83, 108,  
111, 112, 113, 114, 115, 116, 117,  
118, 119, 120, 121, 124, 125, 126,  
127, 128, 129, 130, 131, 132, 133,  
134, 135, 136, 137, 138, 139, 140,  
141, 142, 143, 144, 145, 146, 149,  
150, 151, 152, 153, 154, 160, 170,  
176, 177, 178, 179, 180, 181, 182,  
183, 185, 186, 187, 188, 190, 192,  
193, 194, 195, 196, 197, 198, 199,  
200, 201, 202, 203, 204, 205, 206,  
207, 208, 209, 210, 211, 212, 215,  
218, 219, 220, 221, 222, 223, 224,  
226, 227, 228, 229, 230, 233, 234,  
235, 236, 237, 238, 245, 246, 247,  
250, 251, 254, 263, 266, 267, 274,  
277, 278, 279, 280, 281, 282, 283,  
284, 285, 286, 287, 288, 289, 290,  
292, 293, 294, 295, 296, 297, 298,  
299, 301, 302, 303, 304, 305, 306,  
307, 308, 309, 310, 311, 312, 313,  
314, 315, 316, 317, 318, 319, 320,  
321, 322, 323, 324, 325, 326, 327,  
328, 329, 330, 331, 334, 336, 337,  
338, 340, 341, 342, 343, 344, 345,  
346, 347, 354, 360  
Sustainability 27, 45, 147, 150, 151, 153,  
240, 283, 285, 293, 295, 298, 352,  
353, 356

sustained attention 157, 158, 164, 168,  
169, 170, 171, 174, 176, 178, 181, 182  
systematic literature review 1, 2, 3, 23, 24,  
28, 40, 43, 44, 45, 69, 109, 147, 148,  
150, 155, 298  
Systematic Review 1, 28, 44, 49, 71, 83,  
107, 121, 147, 148, 149, 151, 152,  
153, 154, 155, 182, 214, 240, 298,  
332, 334, 337

## T

teachers 2, 18, 20, 34, 38, 39, 54, 57, 61,  
63, 77, 113, 121, 128, 129, 134, 135,  
140, 145, 147, 154, 178, 187, 195,  
196, 197, 198, 200, 207, 212, 217,  
218, 219, 220, 223, 227, 229, 231,  
232, 233, 234, 236, 237, 238, 240,  
241, 243, 245, 246, 247, 250, 251,  
263, 266, 274, 279, 280, 284, 286,  
287, 290, 291, 292, 293, 294, 295,  
296, 298, 299, 302, 303, 305, 307,  
312, 313, 327, 331, 332, 335  
Teaching 1, 2, 3, 13, 14, 16, 17, 19, 20, 21,  
24, 26, 28, 29, 32, 39, 43, 44, 49, 51,  
54, 56, 59, 60, 66, 68, 69, 72, 75, 77,  
81, 83, 88, 105, 106, 107, 112, 115,  
118, 120, 124, 126, 129, 130, 131,  
133, 134, 135, 137, 141, 142, 146,  
147, 149, 152, 153, 154, 186, 187,  
188, 189, 192, 193, 194, 195, 196,  
197, 198, 199, 200, 201, 202, 203,  
204, 207, 208, 209, 213, 215, 217,  
218, 219, 220, 221, 222, 223, 224,  
227, 228, 229, 230, 231, 232, 233,  
234, 235, 236, 237, 240, 241, 242,  
243, 244, 245, 246, 278, 282, 283,  
284, 285, 286, 287, 288, 290, 291,  
292, 293, 294, 296, 297, 299, 302,  
303, 305, 308, 311, 312, 313, 314,  
316, 317, 318, 319, 321, 322, 323,  
325, 326, 327, 329, 330, 333, 334,  
335, 336, 337, 338, 339, 341, 342,  
343, 344, 345, 346, 347  
technology 2, 3, 10, 12, 13, 14, 15, 16, 17,  
18, 19, 21, 24, 26, 27, 31, 40, 41, 42,  
43, 44, 49, 50, 52, 56, 57, 59, 61, 63,

64, 65, 66, 67, 69, 70, 72, 73, 76, 82,  
83, 88, 104, 105, 107, 109, 111, 113,  
114, 119, 120, 121, 124, 125, 126,  
127, 128, 129, 130, 134, 135, 136,  
137, 139, 140, 141, 143, 144, 145,  
147, 148, 149, 152, 153, 154, 157,  
158, 160, 166, 168, 171, 174, 178,  
179, 181, 183, 185, 186, 187, 188,  
190, 192, 194, 195, 196, 197, 198,  
200, 201, 202, 203, 205, 206, 207,  
208, 209, 211, 212, 213, 214, 215,  
218, 220, 221, 223, 225, 226, 233,  
238, 240, 241, 242, 243, 244, 256,  
258, 266, 268, 269, 270, 271, 278,  
279, 280, 281, 282, 283, 284, 285,  
286, 287, 288, 289, 290, 291, 292,  
293, 294, 295, 297, 298, 302, 304,  
308, 310, 311, 313, 318, 327, 330,

331, 333, 334, 335, 336, 337, 338,  
350, 351, 353, 355, 361

Terrestrial Animals 75, 78, 81, 83, 86, 88,  
89, 90, 102, 103, 104

thematic analysis 23, 111, 114, 121, 325

## U

university students 23, 24, 26, 28, 40, 178,  
185, 186, 193, 195, 201, 202, 204,  
205, 207, 208, 209, 210, 211, 314, 331

## W

working memory 157, 158, 159, 161, 171,  
172, 173, 174, 177, 179, 183, 203,  
204, 225

