Subject Index

Advanced spelling code, 55–65, 70, 323, 334–335	theories of "brain activation," 290, 292, 294, 296, 306, 309, 342
Affix, 267	unconscious analysis in reading, 206
Allophone, 42	
Alphabet charts, 32	Classroom observations, 83-85, 101,
Alphabetical order, 28, 29	109–115, 323, 331
Alphabet principle, 83, 176-177, 276	Clay tablets, 20
Articulation (speech-motor) training,	Coarticulation, 155, 190, 344
131, 178, 325–326	Code overlaps, 46-47, 63, 83
Artificial transparent alphabet, xvi,	Codes, 252
56, 75–76, 323	as writing systems, 11-13, 17, 39, 49
Attention	Cognitive models of reading/spelling,
in the classroom, 138	terms and expressions. See also
and memory, 115, 121	Spelling
and phoneme awareness, 155	consistent/inconsistent neighbors,
Attention span (brain), 343	292–295, 299, 301, 306–307, 312
	consistent/inconsistent rimes, 293-
Basic code, 56, 59, 75-77, 82, 111,	295, 302, 304, 306–308, 310
321–324	exception words, 292-295
programs for teaching, 130-145	friends/enemies, 301, 304, 307, 312
spelling chart, ix	orthographic consistency, 297-298,
Binomial test, 164, 221	302, 304, 306
Brain	orthographic redundancy, 297
conscious analysis in reading, 190,	orthographic rime, 292-297, 299-
192–193, 248, 343–347	300, 304, 307–309, 311–312, 315,
neuro-anatomy and neural	338
pathways, 338-339	orthographic versatility, 297-298
processing print, 280, 288, 296, 305,	phonological rhyme, 292, 296, 308-
315, 336, 338–347	309, 312

Cognitive models of reading/spelling, DISTAR (direct instruction method), terms and expressions (cont.) 104–105, 127 regular words, 292-295, 338 Down's syndrome and reading, 2, word body, 291, 295, 338 155 word family, 292, 299 Dyslexia, 2, 3, 6 word frequency effect, 292, 303 Color-coded text, 136 Effect size definition, 124-125 Compounding languages, 62 formula, 124 Computer models of reading, 287– 288, 296, 305–316, 336–339 Encoding, 37–39, 252 attractor network model, 311–315, English language structure, 55–56 337 English spelling classification systems dual-route model, 287–289, 307, Webster, 47–48 338 Venezky, 48–52 Hanna et al., 53-55 parallel distributed processing model, 288–289, 305, 336, 344 McGuinness, 55-65 recurrent connections, 311–312 English spelling system. See also Computer training studies, 159 Spelling Consonants Anglo-Saxon spellings, 55, 59, 62 blends, clusters, 9, 61, 83, 176, 313, defined, 41 318 Greek-based spellings in, 54–55, 62, voiced, 155 64–65, 68 Cooperative Research Program, 86-Latin-based spellings in, 54-55, 62-64, 334-335 103 Copying/writing as learning tool, multisyllable words and, 54, 62 112, 114, 118, 156, 185, 323, Norman French spellings in, 55, 59, 335 62, 64 predictable patterns of, 51, 61 Dale, Nellie, 76–77, 325–326 problems with, 46–47, 65 Deaf children and reading/spelling, spelling alternatives, 57–60, 63, 19, 283-286 Decoding, xv, 37–39, 48, 113, 164, structural features, 59-62 ERIC database, 194-195 211, 252 Decoding strategy, 57, 114–115, 269, Experimenter-designed tests, 161 Eye movements and reading, 191– Demographic data, 88, 99 193, 208, 343 Diacritic mark, 2, 31, 54 context effects, 192, 196-197 Digraphs, 2, 44, 45, 50, 77, 83, 180, functional span, 192 287, 299, 301, 313, 320, 322, perceptual span, 192 324 syntax effects, 192–193

Freud's stage model, 253–254 Longitudinal studies, 103–105, 260, Functional illiteracy 265, 327 countries and, 1, 6, 322 rate of, 1, 5 Many-word problem, xiv, 248, 279– Function words in reading, 344–347 316 Mapping systems, 11–12, 15, 320 Head Start, 103, 217, 223 Memorization Homophones, 16 letters as aid, 170 limits to, 18–19, 22, 26, 34, 74, 318 International reading surveys, 1, Memory 349-353 promoted by, 114 recall, 37, 70, 116, 232, 247, 273 Jolly Phonics actions, 138–139, 141, recognition, 37, 70, 116, 247, 273 325-326 rote visual in reading, 279, 283, 284–287, 289 sight-word reading and, 251 Kindergarten, origin of, 171 Meta-analysis, 124–125 Missing letter effect, 345 LAC test of phoneme awareness, 169 Languages, impact on writing system Montessori, Maria, 37, 275 Akkadian, 20 Morphology, 62 Arabic, 19 Moveable alphabet, 131 Aramaic, 30 Chinese, 21, 56 Naming speed, 277, 327, 341–342 Egyptian, 19 National Assessment of Educational German, 3 Progress (NAEP), 1, 212–213, 236 Greek, 34 National Reading Panel, viii, xiii, xiv, Hebrew, 19 xviii, 70, 73-75, 107, 247, 317-Indian, xv, 27–28 320, 322–334 Japanese, xv, 22 comprehension training, 215, 234, Sumerian, 20 237, 331 Language development, 153 fluency training, 193-196, 328 Language types and writing systems phoneme awareness training, 153-Hamito-Semitic, 19, 23, 31 188 Indo-European, 27, 30 reading instruction, 121–152, 323– Tonal languages, 21 Letter names and learning to read, vocabulary training, 226, 228, 330 184, 251, 323 Letter-sound correspondences train-OECD (1995, 1997), 1, 349–353

Opaque alphabet, xvi, 3, 13, 39–40,

46, 75, 159, 247, 250

ing, 166, 170, 175, 178–179, 182

Ligature as diacritic, 27

Paired-associate learning, 18, 19, 74,	visual phonics, 130, 14/, 149, 151,
277	319, 320–323, 336
Paleography, 6, 11-13, 23	whole-to-part phonics, 130, 320
Parental involvement, 138	Phonics and speech-motor training,
Phoneme awareness	131, 152
blending/segmenting, 111, 116, 136,	Phonics teaching approaches
141, 154, 156, 161–163, 166–167,	analytic or intrinsic phonics, 81, 85,
170–171, 173, 176–179, 187,	129, 139, 319, 324
323–324, 326, 335	basal-reader phonics, 129, 146, 148,
computer training in, 160	320–321
decoding and, 279, 280-281, 283	embedded phonics, 133, 136
explicit awareness, 153–155	explicit phonics, 129, 147
skills in, 148	linguistic phonics, 129-130, 146,
training of, 112, 134, 153-188, 318,	151–152, 155–156, 173, 178,
327–328	187–188, 320, 322–323, 325–326
training with and without letters,	334–335
160–161	synthetic phonics, 81-82, 85, 107,
Phonemes	129–130, 151, 320
chart of, ix	systematic phonics, 129, 151
consonants, 51, 54	Phonograms, 46, 83, 287, 301, 320
definition, xv	Phonological awareness. See also
schwa vowel, 52, 54	Phoneme awareness
tasks	alliteration, 164-166, 173
classification, 161	origin of, 6
discrimination, 161, 166, 169, 186	rhyme identity, 154, 164–166, 173,
identification, 161, 166-168, 173,	186
178, 185–186, 335	syllable analysis, 180
manipulation/deletion, 161, 169,	syllable/rhyme segmenting tasks,
170, 173, 186	159, 163–166, 172
sequencing (blending/segmenting),	training of, xviii, 109
161, 185–186	Phonological development theory, 6,
transitivity, 176, 335	109, 153–154, 157, 163–164, 186
vowel + r, x, 51, 53	Phonological/phoneme training
vowels, 53–54	programs
Phonics categories	Lundberg program, 163, 172, 182,
junk phonics, 130, 320	184
linguistic phonics (see Phonics,	Sound Categorization, 164–166,
teaching approaches)	169, 173
multi-sound phonics, 130, 320	Sound Foundations, 176

Phonological units in reading critical thinking strategies, 244 instruction length of training, 236 onset-rime analogy, 126, 129, 141 multiple strategy technique, 238 syllable analysis, 180 National Reading Panel review, Phonotactics, 7, 23, 34, 55–56, 74, 215, 234, 237 280, 291, 318 reciprocal teaching programs, 235, Piaget's stages, 253-254 238-241 summary of, 330-333 Prefixes/suffixes and spelling, 62–63, 268 visualizing/verbalizing program, Project Follow Through, 103–105 238-240 Prototype for reading instruction, 38, Reading frequency (print exposure) 73, 82, 111, 121, 127, 184, 317– impact on accuracy, 282–283 319, 323-324 tests of, 281–286 for training fluency, 194-195, 199, programs fitting prototype, 131– 145, 152 Proto-writing, 14 word familiarity and, 344 PsychINFO database, 194–195 Reading instruction Austria, 175, 210 Reading comprehension California, 5 measures of Canada, 40, 139, 141 cloze test, 214 England, 40, 138, 191 factor analysis, 214 Finland, 39–40 functional illiteracy, 212–213 Germany, 4, 39, 171–173 in-house tests, 235–238 Italy, 39 meta-analysis, 235–237 Norway, 39, 178 NAEP tests, 212, 236 Scotland, 139, 141 standardized tests, 212-214, 236-Sweden, 39 239, 241, 244 Texas, 187 treatment fidelity, 243 Reading methods. See also Phonics, skills. See also Story comprehension teaching approaches basal readers, 4-5, 77, 80-83, 86, decoding accuracy and, 211–214, 235 92, 94, 97, 102–103, 108, 128, 147, 152, 216, 317 oral (listening) comprehension and, 211-214, 235 basal + phonics, 87, 90–91, 94, reading fluency and, 211-213, 235 103 vocabulary and, 211 eclectic or balanced, 5, 6, 74, 84, training methods 111–113, 146 Block comprehension program, language experience, 87, 90-91, 94, 242 - 244110–111, 123–124

Reading methods (cont.) Orton-Gillingham, 126, 180 linguistics-based, 81-82, 90-91, 94, Phonic Exercises, 91 Project Read, 68–69 look-say, 4, 77, 85, 341 Reading Recovery, 137, 182, 184 phonics, 4, 42, 77–78, 83, 85, 97, Scott-Foresman basal reader, 82, 90, 110–113, 128, 319 147, 181 reading schemes (UK), 4, 128 Sing, Spell, Read, and Write, 147 real books, 4 Speech to Print, 91 sight-word, xviii, 4, 9, 19, 34, 74, Success in Kindergarten, 185 112, 114–115, 181 Webster's Blue-Backed Speller, 47– whole language, 4–5, 108, 122–124, 48, 78 136, 152, 147–149, 152, 216, Word Power, 91 220 Reading speed and fluency, 159, whole word, xviii, 4, 108, 146, 317-189–211, 159, 328. See also 318 Rereading method for fluency Reading programs training DISTAR, 104–105, 127, 180–181 comprehension and, 189, 191, 193, Fast Phonics First, 139–145 198, 200–201, 203 Ginn basal reader, 82 good versus poor readers, 208 Glossic, 76 National Reading Panel report, 189, Harper and Row basal reader, 147 193-196 Hay-Wingo, 77 prosody and, 200–203 Houghton-Mifflin basal reader, 147, reading rate, 191-193, 196 149 sight word training and, 196–197 slow readers, 2, 189-193, 210 Initial teaching alphabet (i.t.a.), 77, 82, 87, 90, 92–94, 97–99, 103 speaking rate and, 190–191 Jolly Phonics, 111, 113, 138–145, Reading tests, generic 152, 162, 188, 323–324, 327, fluency, 159, 172 334 nonsense word decoding, 131, 148, Letterland, 185 164, 178 reading comprehension, 110–111, Lindamood Auditory Discrimination in Depth, 77, 172 131–135, 152, 170, 325–326 word attack, 133, 334 Lippincott, 78, 82–83, 87, 90–91, word identification, 133, 334 94, 97–99, 103, 107, 117, 131– word recognition, 133, 334 132, 188, 323 Reading wars, 78, 86, 317 New Primary Grade Reading Rereading method for fluency System, 146-147 training Open Court, 135–137 audiotape and, 200-201, 203

decoding accuracy and, 189–191, 193, 196–201, 203, 205, 207–209 proofreading and, 205–208 target goal, 196–205 text difficulty and, 207–210 training studies, 194–210, 328–330 transfer effects, 196–206 Root words, 54–55, 267–268 Rosner test of phoneme awareness, 186

Sex differences in reading, 88, 92, 98, 103 in spelling, 92, 98, 103 Sight words functional sight vocabulary, 340 late-stage sight-word reading, 339– 343 myth of, 9, 34, 343 as reading method, 288 traditional sight word lists, 52 true sight words, 57-59 Silent letters, 57 Speech perception, 153, 155 Spelling alternatives, 46-47, 54, 83, 130-131, 139, 151, 270–271, 298, 310, 320 - 321categories of spelling words rare spellings (exception words), 267, 269, 271, 279 regular spelling, 43, 44–45, 56–57, 247, 266–267, 270–271, 273 errors, 115-121 linguistic/visual features of spelling code used in cognitive research bigram/trigram frequencies, 285, 287, 291, 297–298, 308 checked vowel "rule," 289

consonant-doubling "rules," 267-268, 271, 289 grapheme-phoneme correspondence "rules" (GPCs), 44-45, 288–290, 306, 308, 344 linguistic structure and, 265–266, 271, 279 morphological structure and, 266-269, 271, 274, 279, 290 orthographic "rules," 279–280, 290, 340 orthographic structure, 279–281, 291, 297, 305–306, 313, 315, 344 orthography defined, 17, 43, 45– 46, 48–49, 55 phoneme-grapheme correspondences, 279, 285, 288–290, 326, 328 phonotactic structure and spelling, 280, 291 spelling generalizations, 43–44 spelling "rules," 43–44, 50, 119, 251, 266, 268, 274 methods based on structure of the code, 55-65, 69-70 methods in schools invented spelling, 108, 116–117, 120, 184, 187, 248, 252 letter-name spelling, 116–117 miscellaneous, 120-121 research on traditional programs, 247 - 248rule-based, 43-44, 50, 119 predictors reading skill, 250 sex, 249-250 verbal IQ, 249, 268, 282 probability structure of spelling code

Spelling (cont.) specific context-dependent spellings, 280 British Ability Scales, 183 context-free spellings, 271, 313 California Achievement Test, 120 frequency in print, 50, 53, 57, 284, California Test of Basic Skills, 147 291, 293, 297–298, 301, 307–308, Comprehensive Test for Basic 338 Skills, 120 statistical probability, 46-47, 53, Detroit Test of Learning Aptitude, 239 57, 59, 120, 284–286, 287, 297– 298, 301, 336, 338 Fry Word List, 88–90, 94, 96–98 structural redundancy, 45–47, Gates-MacGinitie, 149, 239, 250 Gates Word List, 89-90, 94, 96-59, 61, 280, 286, 297, 300, 306, 97 315 processing strategies, 264 Gilmore Tests of Accuracy and letter names, 251, 274, 275–278 Rate, 88–89, 94, 96 letter-sounds, 251, 276–277 Iowa Test of Basic Skills, 229, 243, 333 visual memory, 268, 269–270 reform, xvi McGraw-Hill Basic Study Skills, 120 research on new teaching methods, 65 - 70Metropolitan Achievement Test stage models, 250-265, 272 (MAT), 104–105, 120, 169 stages, 55, 109, 116–117, 248–250, Murphy-Durrell Letter-Name, 89 Peabody Comprehension Test, structural analyses of the spelling 214 code Phoneme Discrimination Test, 89 Hanna et al., 53–55 Pintner-Cunningham IQ Test, 89 McGuinness, 55–65 Schonell Spelling, 185 Venezky, 48–53 Stanford Achievement Test (SAT), Webster, 47–48 147, 241, 284 systems origin, 40-41 Test of Written Spelling, 70 Wechsler Adult Intelligence Scale test types (WAIS), 268 spelling dictation, 117–119, 167, 335 Wechsler Intelligence Scales for spelling recognition, 118–121, 268, Children (WISC), 214, 239 272 Wide Range Achievement Tests Standardized spelling, 43, 46 (WRAT), 104–105, 239, 268, Standardized tests 281–282, 286 Woodcock Reading Mastery, 69, general, 79, 149, 158–159, 160–162, 171–172, 179, 181, 185, 189, 270, 147, 150, 170, 176, 179, 213–214, 334 281–282, 284

Statistical analysis multiple-choice tests in research, availability of, 79, 85 221–223, 225, 229 National Reading Panel report, invalid methods of, 91–93, 98 valid methods of, 94-97 226, 228 Story productive vocabulary and, 222, 230-232, 331 comprehension, 224 receptive vocabulary and, 223, 230, grammar, 211, 236 recall, 230-231 232 Sumerian schools, 38, 115 standardized tests and, 221, 227, 229 Test construction, 188 successful programs, 229–235 Transparent alphabets, xv, 2–3, 32, teacher-child interaction, 224 39–40, 55, 75–76, 159, 175, 178– Voice-onset latency/response time, 179, 191, 277 293–294, 296, 303, 312 Treatment fidelity, 100 Webster, Noah, 37, 44, 82 Universal education, xviii Word families, 5, 7, 9, 46, 62, 82–83, 126, 318 Vocabulary Word play in teaching, 154 acquisition, 215-219 Writing systems children's literature and, 215 ancient heritability/verbal IQ, 219 Akkadian, 11, 20 oral comprehension, 215 Anglo-Saxon, 39, 40-41, 46 productive vocabulary size, 216, 233 Aramaic, 11, 30 reading and, 215 Assyrian, 24 television and, 215 Babylonian, 11, 13, 24, 29–30 word derivation, 215 Chinese, 18, 20–21, 25–26 training Crete, 11, 27 classroom lessons and, 112-113 Egyptian, 11, 13–16, 18–19, 23, 31 dangers of whole language, 220 Greek, 28, 31, 32, 34, 39, 41 deducing meaning from context, 232 - 233Hittite, 6, 11, 24 Indian, 27–29 frequency of exposure and, 229-233 Japanese, 21–22, 33 Head Start, 217, 233, 331 Korean, 28–29, 30 listening to stories as method, Mayan, 11, 15–16, 27 221-226 Norman French, 40-41 meta-analysis of classroom Old English, 40 research, 226-227 Old Persian, 28–30

Writing systems (cont.) Phoenician, 29, 31-32 Roman (Latin), 41, 46 Sumerian, 11, 13–14, 18–20, 25– 26, 38 Vietnamese, 24 assumptions about, 32 comparative analysis of, 6-8, 11, 14-18, 339 definitions of, xiv, 11–18, 33 evolutionary theory of, 6-7, 17, 23-24, 33 function of, 14 modern Arabic, 31 Cherokee, 28 Danish, 159 English, 40-41, 191 European, 32 Finnish, 39-40, 159 German, xv, 40, 159, 172–175, 189, 191, 277 Israeli, 40, 159 Italian, xv, 159 Norwegian, 159, 178 Spanish, xv, 159 Swedish, 159 myths about, 8, 9 scripts Brahmi script, 28 cuneiform, 30 Han'gul, 29-30 hieroglyphics, 16, 19, 31 hiragana and katakana, 22, 28 kanji, 21–22, 33 Linear A, 11 Linear B, 11, 27, 34 semantic classifiers, 19-21, 32

types (see also Opaque alphabet, Transparent alphabets) alphabet, xv, 6-7, 13, 31-32, 34-35, 75, 83, 154–155, 318 consonantal alphabet (consonant cueing), xv, 19, 31-32 consonant-vowel diphone (CV diphone), xv, 22, 26-32, 34, 74 logographic, 6, 17-21, 27, 33-34, 339 meaning-based, 17-18, 20, 74 pictographic, 6, 17, 19-20, 27 sound-based, 17, 20 syllabary, xiv, 6, 20-21, 23-26, 31-32 whole word, 16, 34, 74