Index

Abstract the Essence, 115
Abstractness, 79
Adherers-only analysis, 53
Advantaged students, 141
American Pragmatism, 25
Appraising observations, test of, 87–88
Argument analysis skills, 66
Argument evaluation, 102–104
As-treated analysis, 53
Assumption identification, 105–106
Attainment, impact on, 124

BERA ethical guidelines, 58
Bierman report, 21

California Critical Disposition Inventory, 85
Cause-effect relationship, 13
Child-centred approach, 24
Classrooms
  advantaged and disadvantaged students, 141
  recommendations for practitioners, 135–141
  recommendations for researchers, 142
  recommendations for teacher education, 141–142
Collaboration, 6
Communal awareness, 26
Community of Enquiry, 6, 18, 24, 26, 32–33, 41, 45
Community of Inquiry, 18
Community of Philosophical Enquiry, 28–29
Comparative evaluation study, 8, 12, 49, 90, 111, 128, 140–141
Construct-related activity, 109
Constructivism, 25
Convenience sampling, 55
Cornell Critical Thinking Test (CCTT), 86–87
Cost, 4, 10, 51, 148
Creativity, 5–6, 48
  defining, 73
  environment, 77
  impact on different aspects of, 115–117
  improvement, 81–82
  person, 74–75
  impact of Philosophy for Children Programme on, 114
  process, 75–76
  product, 76–77
  relationship between critical and creative thinking, 80–81
Creativity assessments, 89
  latent semantic analysis, 90
  multi-trial creative ideation, 89–90
Credibility, 6
  of sources, 102–104
Criteria, 62
Critical and creative thinking, 145–146
  assessing creativity and critical thinking, 146–147
Critical thinkers, 6, 64–66
Critical thinking, 5–6, 48, 64–66 (*see also* Students' thinking skills)
  as active process, 67
  considered general or subject-specific skill, 69–71
  defining, 61
  domain-specific skill, 78

as guide to action, 62–64
improvement, 81–82
Lipman's definition of, 61–62
as problem-solving, 64–67
relationship between critical and creative thinking, 80–81
value-neutral, 67–69, 77–78
working definition, 71–73, 78–80
Critical thinking assessments, 85
alternatives, 100–101
assumption identification, 105–106
CCTT, 86–87
construct, 99
deduction, 104–105
designing, 98–101
Ennis–Weir Critical Thinking Test Essay, 87
evaluation of argument and credibility of sources, 102–104
form of assessment, 99–100
guidelines for constructing good multiple-choice items, 101
HCTA, 86
New Jersey Test of Reasoning Skills, 89
purpose, 99
sample items of, 102–106
test of appraising observations, 87–88
Watson Glaser Critical Thinking Appraisal, 88
Critical thinking skills, impact on different, 112–114
Crossovers, 13
Curriculum, 5

Decision-making, 66
Deduction, 104–105
Department for Education, 55
Developmental theory, 31
Dewey, John, 24, 62, 146
Disadvantaged students, 141
impact on disadvantaged students' attainment, 125
Divergent thinking, 75, 79, 82, 89–90, 92, 118 (*see also* Critical thinking)
Dunning-Kruger effect, 138
Durham Commission on Creativity and Education (DCCE), 6

Education in England, 3
Educational system, 17
Effect size, 22, 40, 42, 46, 54, 140
Egocentrism, 31
Elaboration, 79
Emancipatory approach, 23
Emotional-related school intervention, 14
Ennis, 62–63
Ennis–Weir Critical Thinking Test Essay, 87
Ethics, 58
Evaluation, 10, 143
Evaluators, 143–144
Evidence, 10
synthesising, 14–15
Evidence-based approach, 20
Evidence-based education, 3–4
Experimental design, 20

Facilitator, 26
Fair-mindedness, 88, 145
Fidelity to implementation, 52–53, 56
Flexibility, 75, 92
Fluency, 75, 79, 92, 97, 147
Formal criteria, 62
Free School Meals (FSM), 55, 121, 133
Functional creativity, 78, 80, 147
Fuzzy Regression discontinuity, 13

Gain scores, 54
Generating new evidence
analysing data, 53–54
conducting evaluation study, 50
ethics, 58
limitations of research design, 58–59
method of conducting Philosophy for Children study, 54–56

pre-test and post-test, 52
process evaluation, 52–53
process evaluation and analysis, 56–58
recognising and reporting limitations, 54
research design, 50–52
response rate and missing data, 56
thinking skills, 49–50
Google Scholar, 40
Grading system, 37
Grammar, Punctuation and Spelling (GPS), 120
Guilford, 75, 79

Halpern, 66, 72
Halpern Critical Thinking Assessment (HCTA), 66, 86
Harry Stottlemeier (novel), 27

Imagination, 80
Inference, 64, 71
Informal criteria, 62
Innovation, 79, 94, 116
Institute for the Advancement of Philosophy for Children (IAPC), 89
Instruction, 23
Intention-to-treat analysis, 53, 59
Inter-rater reliability, 93
Internal consistency, 108
International Bureau of Education (IBE), 20
Interrupted time series experiments, 14
Intervention group, 55
Intra-rater reliability, 93

Judgment: deductive logic and assumption recognition, 85
Justification, 28

Knowledge, 24
acquisition, 66
Kuder–Richardson reliability, 107–108

Latent semantic analysis, 90
Learning, 25–29
environment, 33
theories, 23
Lipman, Matthew, 17
definition of critical thinking, 61–62
Literature gaps, 11–14

Marking, 106–107
Maths, 5
Maximum Value, 95
McPeck, 63, 68–69
Measurement tools for comparative evaluation study, 90–91
Mega-criteria, 62
Meta-analysis, 22
Meta-criteria, 62
Metacognition, 61
Metacomponents, 66
Missing data, 122–123
Multi-trial creative ideation, 89–90
Multidimensional evaluation framework, 4
Multidimensional programme evaluation, 7, 35
dimensions of evaluation, 10
identify ways to fill in literature gaps, 11–14
offer recommendations, 15
pedagogical evaluation, 11
purpose of evaluation, 9–10
synthesising evidence, 14–15
systematic literature review, 11
Multiple dimensions, 9
Multiple-choice assessment, 88

National Pupil Database (NPD), 119
New Jersey Test of Reasoning Skills, 89
Norm-referenced group, 95

Observation, 24, 64, 67
Offer recommendations, 15
Originality, 75

Paul, Richard, 70–71, 88
Pedagogical evaluation, 11, 22 (*see also* Multidimensional programme evaluation)
  evaluate main elements of programme, 25–29
  examine oppositional views, 29–32
  identify stance and justify, 22–23
  investigate programme rationale, 23–25
  reach to conclusion, 33–34
  search for inconsistencies and areas for improvement, 32–33
Pedagogical principles, 2, 7, 11, 22, 26, 34
Pedagogy, 33
Person, 74–75
Personality traits of creative people, 79
Philosophy for Children (P4C), 1–3, 6–8, 13–14, 17–18, 27, 40–43, 49, 61, 85, 104, 111, 116, 119, 128–133, 135, 143
  comparison group, 55–56
  example, 18–19
  intervention group, 55
  method of conducting Philosophy for Children study, 54
  need for evaluating, 20–22
  pedagogical evaluation, 22–34
  impact of Philosophy for Children Programme on creativity, 114
  impact of Philosophy for Children Programme on critical thinking, 111–112
  purpose of evaluation, 18
  questioning mind, 19–20
  school recruitment, 54–55
Piloting of assessments used in philosophy for children evaluation, 110
Post-test, 52
Practitioners, recommendations for, 135–141
Pragmatism, 24
Pre-test, 52
  equivalence, 39
Premises, 3–6
Prevalence score, 95
Primary school philosophy, 18
Problem Solving Inventory, 85
Problem-solving, 5
  critical thinking as, 64–67
Process, 75–76
Process evaluation, 52–53
  and analysis, 56–58
Product, 76–77
Programme effectiveness, 127, 133–134
  Philosophy for Children, 128–133
  synthesis of evidence, 129–130
Programme fidelity, recommendations on, 140
Progressive pedagogy, 25
Propositional knowledge, 5
Prosocial behaviour, 45
Psychometric properties, 107
  reliability, 107–108
  validity, 108–110

Quality of evidence, 37–39
Quasi-experimental study, 111
  findings, 117–118
  impact on different aspects of creativity, 115–117
  impact on different critical thinking skills, 112–114
  impact of Philosophy for Children Programme on creativity, 114
  impact of Philosophy for Children Programme on critical thinking, 111–112
Questioning mind, 19–20
Questionnaires, 45, 56

Randomisation, 20, 37
Randomised controlled trials (RCTs), 4, 12, 14, 39, 50–51, 93, 126, 128, 144
Reading, 3, 21, 46

Reasoning, 104
Recruitment process, 55
Reflective thinking, 24
Regression discontinuity, 13–14
Relativism, 5
Reliability, 107–108
ResearchED, 4
Researchers, recommendations for, 142
Resistance, 79
Retrospective quasi-experimental design project, 8

Sampling methods, 50
School recruitment, 54
School-based dialogic intervention, 17–18
School-based intervention, 2, 3, 25
School-based programme, 1–2
Schooling, 146–147
Science, 5
Secondary data analysis, 119
  analysis, 123
  cases, 120–122
  as evaluation method, 119–120
  findings, 123–125
  missing data, 122–123
Self-confidence, 138–139
Self-corrective thinking, 62
Self-esteem, 138–139
Skills-based curricula, 4–6
Social programmes, 2
Social skills, 136–138
Society for the Advancement of Philosophical Enquiry and Reflection in Education (SAPERE), 18
Socio-constructivism, 23, 25
Software, 1
Split-half reliability, 107–108
Standard deviations (SDs), 40
Stimuli, 27
Student, 25–29
Students' creativity
  assessing, 92–93
  calculating overall creativity score, 96–98
  first activity, 94–96
  marking, 93
  second activity, 96
Students' skills, 5–6
  impact of philosophy for children on, 43–46
Students' thinking skills, 85
  assessing students' creativity, 92–93
  creativity assessments, 89–90
  critical thinking assessments, 85–89
  designing critical thinking assessment, 98–101
  marking, 106–107
  marking students' creativity, 93–98
  measurement tools for comparative evaluation study, 90–91
  piloting of assessments used in philosophy for children evaluation, 110
  psychometric properties, 107–110
  sample items of critical thinking assessments, 102–106
Study, 1, 3, 7
Subject-specific skill, 69–71
Systematic literature review, 11, 35
  calculating impact of programme, 39–40
  conducting, 35
  decide on way search will be conducted and identify relevant literature, 36–37
  evaluate quality of evidence, 37–39
  findings of, 47–48
  limitations of review, 46–47
  P4C, 40–43
  impact of philosophy for children on students' skills, 43–46
  specify research question and inclusion criteria, 35–36
Systematic literature review, 49

Talent development, 77
Teacher, 6, 25–29
  questionnaires, 58
  recommendations for teacher education, 141–142
Teaching and assessing skills in schools, 144
  assessing creativity and critical thinking, 146–147
  critical and creative thinking, 145–146
  schooling, 146–147
Teaching and Learning Toolkit, 3–4
Test of appraising observation, 87–88
Theory of Piaget, 31
Theory of Protagoras, 31
Thinking skills, 5, 48–50, 61, 136
  critical thinking considered general or subject-specific skill, 69–71
  critical thinking value-neutral, 67–69
  debates, 77–78
  defining creativity, 73–77
  defining critical thinking, 61–67
  relationship between critical and creative thinking, 80–81
  transparency, 83
  two important debates, 67
Time allocated, 140–141
Torrance, 75–76, 79
Torrance Tests of Creative Thinking (TTCT), 79, 89, 116
Traditional education, 4
Traditional pedagogy, 25
Transparency, 83
Twenty-first century learning, 5

Validity, 108–110
Value, 4, 13, 23
Verbal reasoning, 66

Watson Glaser Critical Thinking Appraisal, 88
Well-being, 139–140
Working definitions, 61
Writing, 1, 23, 36