

Index

References to figures appear in *italic type*;
those in bold type refer to tables and boxes.

45° politics 60–1

A

Academy of Science of South Africa 111
Acemoglu, D. 24
Achimota School 26
Acholi education 23
Acholi medical practice 149
Acholiland 15
actual domain 71
adaptive capacity 137
African traditional education 23–5
African Union 99
Agbedahin, A. 73
agency 73, 140–1
 collective 90
 relational 20, 90, 141, 142, 153–4,
 155, 178
 structure–agency relation 18
agricultural colleges 35, 104
agricultural education and training 46, 67
agricultural extension officers
 (AEOs) 124, **128**
agricultural knowledge systems 53
agriculture 38, 40, 46, **49**, 104
 see also farming
Akoojee, S. 177
Alice (case study) 5, 12–15, **49**
 collaborative horizontalities 66–7
 facilitating verticalities 64
 informal learning 85–9, 90, 92–3, 94–5,
 174
 just research practices 186
 mediation 70, 147–8, 155
 private provision 176
 public provision 170, 171
 transition experiences 124
 vocational teachers 102, 103–4, 110–12
Alla-Mensah, J. 24
Allais, S. 1, 9, 27, 30, 31, 32, 33, 34, 35, 76,
 99, 159
Altvater, E. 47

‘Amanzi [Water] for Food’ programme
 14–15, 127

Anderson, D. 36, 78
Anderson, P. 58
Angucia, M. 140, 146
Anthropocene 37
apartheid 8, 140
apprenticeships 23, 27, 29, 33, 36
appropriate technology movement 29
aquaculture 151
Archer, M. 73
artisanal artistry 141
aspirations 128–32
Austin, G. 24, 25, 26
Australia 57–8, 99
automation 159
Avis, J. 159

B

Baas, L. 57
backyard farming 82–5
Barnett, R. 100
Belay, M. 46
Bhaskar, R. 4, 17, 18, 73, 163
Bjornlund, V. 27
Blaak, M. 146
Black, S. 175
Blom, R. 99
Bond, P. 48
Boog, B. 146
Bos, J. 137
Botswana 29, 32
boundary crossing 94–5, 124, 143, 156, 186
Bourdieu, P. 143
Bourke, A. 144–6
Boyer, E. 149
Brown, P. 159
Brzinsky-Fay, C. 119
Buchanan, J. 57, 58, 99, 137, 159, 172
Buchmann, M. 120
Bunyoro Kitara Kingdom 10
Burawoy, M. 43

- Burkitt, I. 154
 Burns, E. 119, 121
 Busemeyer, M. 2
 Buthelezi, Z. 99
 Bynner, J. 121
- C**
 capacity to learn 137
 capitalism 47
 capitalist accumulation 41–2
 Capitalocene 17, 47
 carbon-centric development 41–2
 case studies
 Alice 5, 12–15, **49**
 collaborative horizontalities 66–7
 facilitating verticalities 64
 informal learning 85–9, 90, 92–3, 94–5, 174
 just research practices 186
 mediation 70, 147–8, 155
 private provision 176
 public provision 170, 171
 transition experiences 124
 vocational teachers 102, 103–4, 110–12
 eThekweni 8–10, 41, **49**
 collaborative horizontalities 66, 161
 facilitating verticalities 63
 just research practices 185
 public provision 170–1
 transition experiences 124, 126, **131**
 vocational teachers 102–4, 106–7, 109–10
 Gulu 15–16, 40, **49**
 collaborative horizontalities 67–8
 facilitating verticalities 65
 informal learning 78, 80–5, 90–1, 92–3, 173
 just research practices 185–6
 private provision 171–2
 public provision 171–2
 transition experiences 122, 124, 127–8, **129, 130, 131, 132**
 universities as mediators 149–52
 vocational teachers 102, 103–4, 107–8
 Hoima 10–12, 40, **49**
 collaborative horizontalities 68, 161
 facilitating verticalities 65
 just research practices 185
 private provision 176
 public provision 170
 transition experiences 122, 126–7, **132, 133**
 vocational teachers 102, 103, 105–6, 109
 catering 125, 127, 130–1, 132, **133**
 Cerceau, J. 59
 Cheru, F. 45–6, 47, 48
 Christensen, T. 91
 churches 11, 32, 169–70, 176
 civil society 43
 civil war 15, 80, 122, 140
 climate change 13, 37, 38–9, 39–41
 Presidential Climate Change Commission (PCCC), South Africa 51
 climate emergency 3
 coal 41
 Cold War 45
 collaborative horizontalities 60, 66–9, 108–12, 161
 see also horizontal connectivities
 collective agency 90
 colonialism 1, 8, 24, 25–7, 44–5
 see also neocolonialism; precolonial skills development
 common mission 61
 communities of practice 142
 community-based networks 127–8, 135
 community-engaged universities 145–6, 149–50, 155
 community life 26
 community transition 124
 Cook, J. 52
 Coombs, P. 29
 Cooper, A. 78, 141
 Cox, D. 100
 crafts 27
 craftsmanship 141
 creative arts **126, 132**
 critical realism 17, 18, 71, 72, 163, 167
 critical vocationalism 120–1, 125
 cultural historical activity theory (CHAT) 146, 147
 curriculum bending 114
- D**
 De Jaeghere, J. 79, 95
 decarbonization 51
 demand 153, 156, 166
 digital technologies 93
 see also social media
 digitalization 159, 174–5
 domain of the real 71
 dualisms 17–18
 Dube Trade Port (DTP) 110
 Durban 8, 9
 Durban University of Technology 104
 Durr, S. 148
- E**
 Eakin, H. 137
 East Africa 7
 East London Industrial Development Zone 53
 Ecclestone, K. 119
 ecological time 61, 70, 162
 ecology *see* political ecology; political-economy-ecology
 economy *see* extractive economy; green economy; informal economy/informal sector; political-economy-ecology; transnational political economy

- ecosystem leadership 61
 - see also* skills ecosystem leadership
- ecosystem metaphor 168
- educated unemployment 29, 30
- education 26, 28, 29, 153
 - see also* African traditional education; higher education; technical and vocational education and training (TVET); vocational education and training (VET)
- Education for All 30
- Edwards, A. 20, 90, 91, 94, 141, 142, 154
- Elder, G. 120
- emergence 53
- empirical domain 71
- employment 7, 27
- enclaves 143
- energy sector *see* oil and gas sector
- Engeström, Y. 146, 147, 154
- entrepreneurship education 76
- environment-making 47
- environmentalism of the poor 44
- Essentials of Education, The* (Jones) 26
- eThekweni (case study) 8–10, 41, 49
 - collaborative horizontalities 66, 161
 - facilitating verticalities 63
 - just research practices 185
 - private provision 176–7
 - public provision 170–1
 - transition experiences 124, 126, 131
 - vocational teachers 102–4, 106–7, 109–10
- Evetts, J. 118
- exclusion 81–2
- extractive economy 26

- F**
- facilitating verticalities 6, 60, 62–6, 143–4, 152, 161–2
- farming
 - Alice (case study) 13
 - learning networks 147–8
 - colonialism 26–7
 - Gulu (case study) 15–16
 - learning networks 82–5
 - vocational training 107–8
 - precolonial Africa 24
 - transition experiences 125, 129, 130, 132–3
 - VET Africa 2.0 28
 - see also* agriculture
- fashion design 129, 130, 132
- Fenwick, T. 118, 119
- Ferguson, J. 46, 48
- Field, J. 118
- field theory 143
- FIFA World Cup 2010 9
- Finegold, D. 56–7, 59, 160–2
 - combining Finegold and Spours models 60
- first economy 2
- Fitchett, J. 38

- food sector 13
 - see also* agriculture; farming
- forced turning points 120
- foreign capital 46
- Fort Cox Agriculture and Forestry Agricultural College (FCAFTI)
 - curriculum revision 104, 174
- Imvothu Bubomi Learning Network (IBLN) 67, 86, 89, 111–12
 - university as mediator 147, 148
- Fort Hare University 14, 67, 147, 148
- fossil capital 17, 42, 46
- fossil capitalism 37
- Foster, P. 30
- Frayne, B. 13
- free market economic policies 46
- Freire, P. 29, 146
- Friedman, V. 143
- friendships 92, 95

- G**
- Gamble, J. 27, 100
- gas *see* oil and gas sector
- gender inequalities 133
- gender injustices 125
- gendered oppression 81
- Ghana 26, 30, 32
- Global Challenges Research Fund 21
- global warming 37
- Grainger, P. 69, 101, 153
- green economy 53
- green skills 50
- Grindrod 10
- Gulu (case study) 15–16, 40, 49
 - collaborative horizontalities 67–8
 - facilitating verticalities 65
 - informal learning 78, 80–5, 90–1, 92–3, 173
 - just research practices 185–6
 - private provision 176
 - public provision 171–2
 - transition experiences 122, 124, 127–8, 129, 130, 131, 132
 - universities as mediators 149–52
 - vocational teachers 102, 103–4, 107–8
- Gulu University 16, 68, 81, 183
- Hoima branch 11, 151
 - university as mediator 149–50
- university as social ecosystem actor 177
- Gupta, A. 19

- H**
- Hall, B. 77
- Hall, R. 58
- Hardt, M. 47
- Heckhausen, J. 120
- higher education 28, 31, 33
 - see also* universities
- Hodgson, A. 4, 5, 6, 55, 61, 161
- Hodkinson, R. 120

Hoima (case study) 10–12, 40, **49**
 collaborative horizontalities 68, 161
 facilitating verticalities 65
 just research practices 185
 private provision 176
 public provision 170
 transition experiences 122, 126–7,
 132, **133**
 vocational teachers 102, 103, 105–6,
 109
 Holocene 38
 horizontal connectivities 6, 142, 148,
 152
see also collaborative horizontalities
 horizontal learning 91–4
 humanitarian agencies 15–16
 hustling 78, 141

I

immanent critique 4, 17
 Imvothu Bubomi Learning Network
 (IBLN) 15, 67, 85–6, 176
 collaborative horizontalities 110–12
 course certificates 104
 curriculum bending 114
 network evolution 87–9
 universities as mediators 147–8
 inclusive development 19
 independence 27–31, 45–50
 independence movements 26
 industrial districts 56–7
 industrial education 26
 industrialization 1, 28, 33, 36
 informal economy/informal sector 2, 7, 19,
 29, 75–6, 96, 164, 172–3
 informal learning 77–9, 173–4
 Alice (case study) 85–9, 90, 92–3, 94–5,
 174
 boundary crossing 94–5
 Gulu (case study) 78, 80–5, 90–1, 92–3,
 173
 horizontal learning 91–4
 relational capabilities 90–1
 informal sector 96
 infrastructure projects 9
 innovation systems 154–5
 Intergovernmental Panel on Climate Change
 (IPCC) 37
 International Commission on the Futures
 of Education 3, 113, 165, 169, 174,
 178, 180–1
 International Labour Organization
 (ILO) 29, 76
 international qualifications 32
 Isenberg, D. 57

J

Jeanes Foundation 26
 Jjuuko, R. 141, 142, 146
 Johanson, R. 30

Jones, T.J. 26
 Jordt Jørgensen, N. 78, 141
 Joseph, J. 73
 just research practices 182–7
 just transitions 50–2, 159, 162, 163, 167
 skills development for 52–4
 Jütting, J. 76

K

Kallaway, P. 25, 29
 Kampala 40
 Kaneene, J. 76
 Kenya 25, 29, 32
 Ker Kwaro Acholi 16, 80, 169
 Kilelu, C. 95
 King, K. 25, 26, 29, 31, 75, 173, 177
 Klerkx, L. 95
 knowledge acquisition pathways 88
 Kraak, A. 31, 34, 56, 57, 140

L

labour fundamentalism 52
 labour market 26, 30
 labour market projections 159
 Land Act 1913, South Africa 12
 Lauglo, J. 34
 Lave, J. 29
 leadership 5, 61, 114, 162
 learning network evolution 89
 learning networks 6, 19, 142–3, 150–1,
 165–6
 backyard farming 82–5
 boundary crossing 94–5, 186
 horizontal learning 91–4
 Imvothu Bubomi Learning Network
 (IBLN) 15, 67, 85–6, 176
 collaborative horizontalities 110–12
 course certificates 104
 curriculum bending 114
 network evolution 87–9
 universities as mediators 147–8
 network facilitators 91
 relational capabilities 90–1
 and transitions 127–8, 135, 137–8
 learning pathways 138
 Leff, E. 41–2, 43, 45
 Lehtonen, A. 154
 Lewin, K. 143
 life *see politics of work and life*
 lifecourse perspective 124
 lifecourse research 120
 lifelong learning 76, 77
see also informal learning
 Livingstone, D. 121, 134
 local definition 114
 Losch, B. 76
 Lotz-Sisitka, H. 4, 5–6, 50, 53, 58, 111, 140,
 142, 148, 162, 178, 179, 180, 186
 Lovedale School 14
 Lucas, W. 100

M

- Mabase, A. 41
- Makerere University 26
- Malawi 28
- Malm, A. 2, 17, 37, 41–2
- Maqwelane, L. 132, 134
- Maritime Academy, uMfolozi TVET
College 10, 66, 102, 170, 171, 176–7
- maritime sector 106–7, 109–10, 161
- maritime transport 41
- maritime VET students 124, 126, **131**
- market vendors 122, 128, 131, 133, **134**
- Marshall, A. 56
- Martínez-Alier, J. 44
- Marx, K. 47, 52
- Marxism 43
- McGrath, S. 1, 4, 11, 25, 27, 28, 30, 31, 34,
56, 57, 77, 78, 84, 161, 177
- McIntyre, B. 53
- McTaggart, R. 146
- mediation 5–6, 60–1, 69–70, 73–4, 101,
162
 - by universities 20, 139, 144–6, 156–7, 166
 - Alice (case study) 147–8, 155
 - Gulu (case study) 149–52
 - by vocational teachers 112–15, 116
- Metelerkamp, L. 6, 78, 91
- migration 28–9
- Millennium Development Goals 30
- minerals 46
- Ministry of Energy and Mineral Development
(MEMD), Uganda 12
- Mkwanzani, F. 90
- Monk, D. 77, 81, 182, 184, 185–6
- Moodie, G. 7, 33
- Moore, J. 17, 42, 47, 52
- multiscalarity 71, 163

N

- Namibia 25, 32
- National Christian Council, Kenya 29
- national qualification frameworks
(NQFs) 171–2, 173
- natural fundamentalism 52
- neocolonialism 44–50
- neoliberal growth model 58
- neoliberal transnational governmentality 46
- neoliberalism 9, 30, 35, 45
- networks *see* learning networks
- Nguimkeu, P. 76
- Norrie, A. 73
- Nyerere, J. 29

O

- Oceans Economy 102
- Ocitti, J. 23
- oil and gas sector 10–12, 41, 46, 48, **49**,
103, 161
- Oinas, E. 52, 136, 142
- Oketch, M. 34

- Openjuru, G. 140, 150
- Operation Phakisa **49**, 102
- Operation Wealth Creation 149

P

- Palmer, R. 35
- Parenti, C. 47–8
- participatory action research (PAR) 146, 150
- Patel, S. 1
- Pawson, R. 17
- Payne, J. 58, 146
- Pesanayi, T. 46, 101, 143, 147, 154, 167,
186
- Phelps Stokes Foundation 25–6
- Phuong, L. 137
- political ecology 45, 163
- political economies 46–7
- political-economy-ecology 41–4, 48, **49**,
50, 159
- politics of work and life 52
- 'poor White problem' 27
- Powell, L. 7, 122, 141, 167
- power relations 44
- precolonial skills development 23–5
- Presidential Climate Change Commission
(PCCCC), South Africa 51
- Price, L. 71
- primary education 28, 30
- private-for-profit education and training 32
- private provision 175–7
- productivity 156, 166
- Psacharopolous, G. 98
- public provision 170–2, 176
- public sector employment 27

Q

- qualifications 136, 171–2, 173

R

- Raffè, D. 119
- Rampedi, M. 140
- Ramsarup, P. 118, 121, 138
- Raworth, K. 43
- real, domain of the 71
- real utopias 43, 53
- Reason, P. 146
- recolonisation by invitation 46
- refugees 149
- relational agency 20, 90, 141, 142, 153–4,
155, 178
- relationality 163
- reliability 83
- renewable energy 41
- research practices 182–7
- Rhodes University
 - 'Amanzi [Water] for Food' programme 14
 - Imvothu Bubomi Learning Network
(IBLN) 67, 86, 87, 89, 110
 - university as mediator 147, 148
 - university as social ecosystem actor 177

- Rogers, A. 32
- Rosenberg, E. 50, 142, 167, 178–9
- S**
- Sachs, W. 39
- Sampson, R. 120
- Sannino, A. 178
- Santos, B. 52
- Santos, F. 91
- Savage, I. 38
- Sawchuk, P. 118, 120–1, 134
- Schoon, I. 120
- Scoones, I. 178
- second economy *see* informal economy/
informal sector
- secondary education 28, 29, 31, 33
- self-initiated turning points 120, 124
- Senge, P. 61
- Sennett, R. 141
- Sheffield, J. 29
- Shiva, V. 39
- Silicon Valley 56, 57
- skills demand *see* demand
- skills development
- for just transitions 52–4
 - precolonial 23–5
- skills ecosystem leadership 5
- skills ecosystems 4–8, 19, 55, 56–8, 160
- see also* social ecosystem for skills
- Skills for Oil and Gas Africa (SOGA) 12, 49, 68, 105, 109, 185
- slave trade 24
- social ecosystem for skills 4–8, 16, 58–61, 160–2
- collaborative horizontalities 60, 66–9, 108–12, 161
- ecological time 61, 70, 162
- expanded model 71–4, 142, 146, 152–4, 156, 162–6
- implications for VET policy and practice 168–77
 - limitations 166–8
 - new language for VET policy and practice 178–81
- facilitating verticalities 6, 60, 62–6, 143–4, 152, 161–2
- informal learning 77–9
- mediation 6, 60–1, 69–70, 73–4, 101, 162
- by universities 20, 146, 147–57
 - by vocational teachers 112–15, 116
- skills development for just transitions 52–4
- vocational teachers in 98–101, 108–15, 116
- social interactions 143
- social learning 142–3
- social media 77, 78, 82–4, 174, 175
- social structures 73, 90
- society–environment relations 44
- South Africa
- Academy of Science of South Africa 111
 - agriculture 38, 40
 - apartheid 8, 140
 - automotive and mining industries 159
 - climate change 38, 39–41
 - colonialism 25, 27
 - East London Industrial Development Zone 53
 - education and training authorities 32
 - energy policy 46
 - energy sector 41
 - higher education 31
 - informal learning 78
 - Land Act 1913 12
 - low-skills equilibria 57
 - Presidential Climate Change Commission (PCCC) 51
 - transition experiences 125, 128
 - transport 40–1, 46
 - unemployment 7
 - vocational teachers 99
 - Water Research Commission (WRC) 14, 85, 86, 87, 147
 - see also* Alice (case study); eThekweni (case study)
- South African Expanded Public Works Programme 5
- Spar retail chain 148
- Spielman, D. 78
- Spours, K. 6, 57, 59, 60–1, 101, 114, 161
- combining Finegold and Spours models 60
- Standing, G. 46
- state, role of 47–8
- Steffen, W. 38
- Stevenson, H. 109
- structural adjustment 30, 31, 45
- structural turning points 120
- structure–agency relation 18
- sustainable development goals (SDGs) 43, 48
- Swartz, S. 142
- Swilling, M. 41, 51, 52–3
- system leadership 61
- system thinking 168–9
- T**
- tailoring 129, 131, 132
- Tanzania 28, 32
- Taylor, E. 77
- teachers *see* vocational teachers
- technical and vocational education and training (TVET) 7, 33–4, 80–1, 99
- Tetrault, D. 39, 44
- Thieme, A. 15, 78, 141
- Tikly, L. 78
- Tomaney, J. 42
- top-down verticalities 65–6
- training-of-trainers (ToT) courses 86–7, 148
- transition experiences 121–5
- enabling and constraining factors 125–8
 - improving transitions 132–4

- individual aspirations 128–32
- vignettes 123
- transition system 119
- transitioning 20, 118–19, 141, 165, 172
 - differentiated approach 134–7
 - just transitions 50–2, 159, 162, 163, 167
 - skills development for 52–4
- transitioning literature 119–21, 136
- transnational political economy 46
- Transnet 10, 106–7, 110
- transport 40–1, 46, 48, 49
- trust 83, 114
- Tshwane University of Technology 31
- Tukundane, C. 146
- Tullov 11
- turning points 120, 124
- U**
- Uganda
 - agriculture 38, 40
 - climate change 38, 39–41
 - colonialism 25, 26
 - Ministry of Energy and Mineral Development (MEMD) 12
 - oil and gas sector 41, 46
 - technical and vocational education and training (TVET) 7
 - transition experiences 125, 126, 132–3, 134
 - transport 40
 - see also* Gulu (case study); Hoima (case study)
- Uganda Petroleum Institute Kigumba (UPIK) 12, 103, 109, 170, 171
- Ugandan Vocational Qualifications Framework 127
- uMfolozi Maritime Academy 10, 66, 102, 170, 171, 176–7
- unemployment 7, 29, 30, 32, 98
- UNESCO 3, 16, 28, 77, 82, 153, 156–7, 169
- United Kingdom Research and Innovation (UKRI) 183
- United Kingdom (UK) 21, 56–7
- universities 6
 - and expanded ecosystem development 152–4
 - as mediators 20, 139, 144–6, 156–7, 166
 - Alice (case study) 147–8, 155
 - Gulu (case study) 149–50
 - as social ecosystem actors 177
 - see also* higher education
- University of Dar Es Salaam 145
- University of KwaZulu-Natal 104
- University of Limpopo 145
- University of Nottingham 183
- V**
- Vaganova, O. 100
- Van der Linden, J. 140
- Van Rensburg, P. 29
- Van Staden, W. 46
- verticalities *see* facilitating verticalities
- VET Africa 1.0 22, 28, 31
- VET Africa 2.0 22, 28–30, 31, 32
- VET Africa 3.0 22, 30–1, 33, 34, 35, 62
- VET Africa 4.0 16–18, 19, 35–6, 48, 61–2, 149–50, 150–2, 180
- VET Africa 4.0 Collective 182–7
- virtual reality programmes 151
- vocational education and training (VET) 1–4
 - contemporary African 31–5
 - current state 158–60
 - definition 7–8
 - entrepreneurship education 76
 - historical development in Africa 18–19
 - colonialism 25–7, 44–5
 - precolonial skills development 23–5
 - since independence 27–31, 45–50
 - implications for VET policy and practice 168–77
 - and just transitions 50–4
 - new language for VET policy and practice 178–81
 - purpose 169–70
 - reimagined 16–18
 - renewed approach to 140–4
 - see also* technical and vocational education and training (TVET); VET Africa 4.0
- vocational learning institutions 6–7
 - see also* private provision; public provision; universities
- vocational pedagogies 100, 113, 114
- vocational school fallacy 30
- vocational teachers 20, 97–101, 141–2, 164–5
 - and collaborative horizontalities 108–12
 - in conventional institutional settings 102–5
 - embedded in work contexts 106–8
 - expanded notion of 115–17
 - as external interventions in conventional system 105–6
 - impact of digitalization on 174–5
 - as mediators 112–15, 116
- vulnerability 51
- W**
- water
 - Alice (case study) 49
 - ‘Amanzi [Water] for Food’ programme 14–15
- Water Research Commission (WRC), South Africa 14, 85, 86, 87, 147
- water resources 38
- water scarcity 46, 85–6
- water stress 40
- Wedekind, V. 57, 99, 100, 101, 153, 161
- Wenger, E. 142
- Wenger-Trayner, E. 142–3

Wheelahan, L. 100, 169

Whitley, R. 155

Windsor, K. 153

Wise, T. 46

work 16, 33, 53, 141

work and life, politics of 52

World Bank 30, 39, 41, 46, 76, 143, 173

Wright, E. 43, 53

Y

Yesufu, T. 177

young people (youth) 15, 17, 52, 76, 78, 141

see also transition experiences; transitioning

youth learning networks 82, 150–1

backyard farming 82–5

youth migration 29

youth unemployment 30, 32, 98

Z

Zeelen, J. 27, 33

Ziderman, A. 35

Zimbabwe 25