

Index

A

- Actor–structure system, 159
- Ambidexterity, 151, 152, 156, 158, 160, 161
 - characteristic of Kaikaku, 81
 - description, 81
 - improvement and innovation, 83, 84
 - improvement cycles, 82
 - Kaizen activities, 84
 - learning cycle, problems and challenges, 82
 - organizational learning, 23, 24, 82
 - performance objectives, 83
 - problem-solving activities, 81
 - production processes, 84
- Automation, industrial
 - benefits, 35
 - competence, operator, 41
 - decisions concerns, 40
 - design and development, 35
 - designing, dual competence areas, 38
 - and flexibility (*see* Flexibility, operational)
 - growth rate, 46
 - large-scale investment, 47
 - management interviews, 40
 - orientations, 36
 - requirement/solution space, 39
 - scope, 46
 - special variants, 43
 - and standardised processes, 42
 - technology strategy, 44, 45
 - witnessed dilemmas, 38

C

- Change management
 - lean production (LP), 14
 - in private and public sectors, 13
 - Six Sigma programs, 13
 - systems thinking and leadership, 14
- Change-and-development process, 154
- Complex production environment, LLs.
 - See* Lessons learned (LLs)
- Complex systems theory, 152, 156, 162, 163
- Contemporary quality management
 - strategies, 24
- Contextual ambidexterity, 158, 160
- Critical realism, 152
- Customer satisfaction, 16, 25

D

- Development work, in lean production
 - as catch-22, 63
 - challenges, 50
 - change-oriented competence, 52
 - coach-driven position, 58
 - competence, 60
 - continuous learning, 61
 - dimensions, 60
 - explanatory account, in company, 54, 55
 - guidance-driven position, 58
 - implementation, 62
 - in industrial production, 55
 - intuition-driven position, 56
 - measures/solutions, 59
 - new opportunities, exploration, 62

- Development work, in lean production (*cont.*)
 - performance of tasks, 53
 - problem solving, tools and techniques, 59
 - professional knowledge and competence, 54
 - professional knowledge and skills, 54
 - requirement, 50
 - team-driven position, 57
 - typology, 55, 56
 - and work orientations, 53
- Dichotomies
 - description, 3
 - exploration and exploitation, 4
 - Orchard, as a Metaphor
 - innovation process, 5
 - knowledge creation process, 5, 6
 - production process, 5
 - value creation process, 6
 - organizational procedures, as former, 3
 - and processes, 4
 - radical and incremental, 4
- Domain-specific competences, 50, 61, 63
- E**
- Effectiveness, quality management
 - healthcare system, 21, 22
 - management decisions, 25
 - modes, quality improvement strategy, 26
 - productivity dilemma, 21
 - quality dilemma, 11, 15
 - quality improvement programs, 14–18
 - service organizations, 12
 - TQM program, 19
- Efficiency, quality management
 - ambidexterity, organisational, 20
 - management decisions, 25
 - modes, quality improvement strategy, 26
 - productivity dilemma, 21
 - quality dilemma, 15
 - quality improvement programs, 14–18
 - service organizations, 12
 - TQM program, 19
- Emergent approach, 153
 - actor–structure system, 159
 - contextual ambidexterity, 158
 - culture, 158
 - difference between parallel approach and, 158
 - emergent structures, 160
 - employees, 159, 160
 - formal structures, 160
 - functional quality management, 159
- Emergent quality management (EQM)
 - coarse-grained level, 161
 - dichotomies, 152, 162
 - dynamics of production system, 163–164
 - fine-grained level, 161
 - four different approach, 164
 - goal, 152
 - impressionistic painting, 161
 - individuals and structures, 162
 - information flow, 160
 - parallel approach, 155–158
 - sequential approach, 154–158
- Emergent structures, 160
- European Foundation for Quality Management model (EFQM), 13, 17
- Exploitation
 - degree of competence, 60
 - and exploration, orientations, 169, 170
 - in product development, 52
 - as work orientations, 53
- Exploration
 - degree of competence, 60
 - and exploitation, orientations, 169, 170
 - of new opportunities, 58, 62
 - in product development, 52
- Exploration and exploitation, Finnish manufacturing industry
 - absorptive capacity, 92, 94–95
 - adaptive organisational processes, 93
 - analysis and assimilation, 107
 - analysis and interpretation, 95–96
 - decision-making, 108
 - description, 91, 92
 - empirical research, 92
 - hierarchic levels, 108
 - innovation systems, 94
 - interpretation and transformation, 107
 - iterative transitions, 97–98, 107, 108
 - metal-industry company, 105, 106
 - networks, 92
 - organisational level, 93, 109
 - organisational networks, 96–97
 - packaging company, 103, 104
 - renewal methods
 - ISM, 99–101
 - RBT, 101–103
 - research framework, 97, 99
 - swinging, 109
 - tacit knowledge, 109
 - theoretical building blocks, 93–97
 - wood-processing company, 104, 105

F

Flexibility, operational
 and efficiency, 36
 challenges, 36
 dimensions, 37
 operative staff, 42
 requirements, on production system, 38
 standardisation vs. customisation, 43, 44
 witnessed dilemmas, 38

Formal structures, 160

Four different approach
 complementary, 164
 emergent, 153
 parallel, 153
 sequential, 153
 suppression, 153

Functional quality management, 159

G

Giddens' theory, 162

I

Innovation
 sessions, 169, 170

Innovation process
 description, 5
 dichotomy, 5
 elements, contemporary production
 system, 1

Innovation session method (ISM), 99–101

K

Kaikaku, 81–84
 ambidexterity (*see* Ambidexterity)
 analytical terms, 167
 characteristics, 69–71, 84
 design of new processes and equipment,
 73, 77–78
 driving structures, 73, 76–77
IE Review and Factory Management, 68
 implementation, 74, 78–79
 improvement activities, 68
 Japanese manufacturing companies, 68
 Kaizen, production, 67
 management, 167
 new processes and equipment, 73, 77
 objectives, 72, 76
 process innovation, 70
 reasons for initiation, 72–76
 results, 74, 79

as spiral process, 167
 success factors, 75, 79–80
 Toyota Motor Corporation, 68

Knowledge creation process
 description, 5
 dichotomy, 6
 elements, contemporary production system, 1

L

Lean production (LP) program
 approaches, 16
 change management, 14
 innovative learning, 51
 programs, 51
 purpose, 51
 variation, in processes, 24
 VSM, 51, 55, 58
 work-based learning, 51

Learning

continuous learning, development work,
 51, 60, 61, 63
 innovation sessions and research-based
 theatre, 170
 innovative, 51, 52
 learning curves, 61
 for professional skills, 62
 proper training and experience, 63
 traditional lean production, 170
 and training activities, 61
 work-based, 51, 52

Lessons learned (LLs)

aerospace industry, 115
 benefits, 114
 challenges, 120–121
 developing factory, 113
 exploration and exploitation, 114
 format, 121, 122
 industrial practice, 115
 knowledge management, 116–117
 operations management, 113
 organizational learning, 116, 127
 process-based learning, 119, 120
 product lifecycle, 114
 project-based learning, 118
 running factory, 113
 skill-oriented activities, 114, 119, 120, 124
 social method, 118
 tacit knowledge, 116–119
 text-based lessons, 128
 validation, industrial setting, 123–126
 videos, 119, 126, 127

LLs. *See* Lessons learned (LLs)

M

Malcolm Baldrige National Quality Award (MBNQA), 13, 17

O

OD training programs (Company X's Operational Development (OD) programs)

principles, 10
and XPS, 10

Operations

large-scale fundamental change, 169
management, 161

Organisational separation, 151, 153, 154

P

Parallel approach

advantages, 157
complex systems theory, 156
create organisational skills, 156–157
definition, 153
difference between emergent approach
and, 158
difference between sequential approach
and, 156
disadvantages, 157
division of production system, 157
soft features, 157

Percolation threshold theory, 163

Production process

description, 5
dichotomy, 5
elements, contemporary production
system, 1

Production system

elements, 1
exploration and exploitation, 3
industrialization, 2
innovative quality improvement model, 2
lean production, 1, 7
production unit, 3
responsibility, 2

Punctuated-equilibrium model, 156, 163

Q

Quality dilemma

combining XPS and OD, 10
commonality, 9–11
definitions, 11
enablers, strategic
and modes, 27
for quality improvement strategy, 26
for stability and development, 25

OD training programs, 10

organizational ambidexterity, 23, 24
productivity dilemma, 22

quality management, 11, 12 (*see also*
Quality management)

XPS training programs, 10

Quality improvement management program

change management, 13, 14
contemporary quality management
strategies, 15–18

description, 13

MBNQA and EFQM, 13

organizational learning, 14

as productivity dilemma, 15

TPS and LP, 14

Quality management

description, 11

efficiency and effectiveness, 12

Facit, Swedish company, 20

improvement program (*see* Quality
improvement management
program)

Intermountain Healthcare, 21, 22

Nippon Telegraph and Telephone (NTT),
reliability, 19

productivity dilemma, 21

role, 11

standard, 11

TQM implementation, 15, 19

R

Radical innovation

ambidexterity, 144

awareness, 131

Ba, 136

characteristics, 134

culture, 135, 147

cyber ba, 138

design process, 144, 146

emergent spaces

accessing places, 142–143

categories, 139

chameleon places, 139–140

grey zone places, 141–142

satellite places, 142

temporary places, 143–144

undercover places, 140–141

improvement places, 131

incremental innovation, 132, 133

innovation laboratory, 131, 132

interacting ba, 138

knowledge conversion and self-
transcending process, 137

knowledge creation, 144

knowledge, values and action, 136
originating ba, 138
 participatory, 145
 photo-based interviews, 145, 146
 power relations, 147
 principles of lean production, 135
 red box, 145
 workplace design, 135–138
 Realist social theory, 162
 Research-based theatre (RBT), 100–103, 105,
 106, 108, 109

S

Sequential approach
 advantages, 154
 definition, 153
 difference between parallel approach and,
 156
 disadvantages, 155
 Six Sigma program, 13, 24
 Small and medium-sized enterprises (SMEs), 68
 Stability, quality management
 customer perspective, 25
 decision making, 25
 modes, quality improvement strategy, 26, 27
 process management and agility, 25
 standardization, 25
 systems approach, 25
 Suppression approach, 153
 Swedish Institute for Quality (SIQ), 13, 17

T

Technology management, automation, 44, 45
 Total quality management (TQM)
 approaches, 17
 description, 13
 implementation, 15, 19
 variation, in processes, 24
 The Toyota Production System (TPS),
 14, 21

V

Value creation process
 description, 6
 dichotomy, 6
 elements, contemporary production
 system, 1
 Value stream mapping (VSM), 14
 Variation, practices
 evaluation criteria, 21
 LP programs, 24
 quality management strategy, 27
 Six Sigma programs, 24
 TQM programs, 24

X

XPS programs (Company X's Production
 System)
 and OD, 10
 principles, 10