Index

Activity-centered design (ACD), 53
Activity systems, 6, 7, 9, 10, 11, 15. *See also* Activity theory
Activity theory, 1, 2, 4, 6, 7, 10, 11, 13, 14, 15, 53, 74. *See also* Activity systems
  approach, 4, 11, 72
  disturbance, 5, 6, 7, 9
  mediation, 4, 5
  object orientedness, 5, 6
  principles of, 4
Addiction, 55, 57, 58, 64, 65
ArtView, 37–48, 50
Authority, 32, 35, 45, 46, 86
Aware technologies, 73, 74, 76

Bijker, W., 4, 11, 15, 16, 17
Brennan, S. E., 32
Bronfenbrenner, U., 7, 8, 53

CampusAware, 84–88
Chat tools, 83
CIMI, 19
Clark, H. H., 32, 33
CMC. *See* Computer-mediated communication (CMC)
Collaborative virtual environments (CVEs), 31, 37, 46, 52
  3-D CVEs, 39, 41, 44
  2-D CVEs, 37, 44
  2-D and 3-D CVEs, 48
Component systems, 9
Computer-centered design approach, 1
Computer-mediated communication (CMC), 37, 46, 49–51, 56, 59, 62, 72
  activity and design, 14
  communication, 56, 59, 62, 72
  learning environments, 53
Computer-supported collaborated learning (CSCL), 53, 67
Concept maps, 20. *See also* Conceptual mapping
Conceptual mapping, 14, 20, 26
Configural analysis, 89, 93, 95
Configurational analysis approach, 91
Configuration theory, 90, 91, 93, 94, 97
Context-aware computing, 73–75, 79, 87. *See also* Location-aware technology
  applications, 76, 83, 87
  systems, 77
  technology application, 76
  tools, 73, 88
Context-based design, 1
Critical mass, 83
  user conceptual model, 82
CSCL. *See* Computer-supported collaborated learning
CVEs. *See* Collaborative virtual environments (CVEs)

Design ecology, 13
Depth, 95, 96

Developer knows best, 18
Divided attention, 62

Ecological
  approach, 9
  model, 9
  perspective, 7
  principles, 10
  systems theory, 7, 9, 10
  theory, 7
Ecology, 8
E-graffiti, 80–85, 87
Electronic messaging, 84
E-mail traffic, 92, 98
Engestrom, Y., 2
Evaluation, 1, 13, 14, 17, 18, 26–28
Exosystems, 8
Eye tracking, 98

Face-to-face
  activities, 32
  communication, 72
  conversations, 33, 43
  dialogue, 65, 70
  discussions, 44, 45, 50
  interaction, 51, 52, 56
  situations, 31, 42

Gay, G., 16, 18, 20, 24, 25, 27, 28, 29, 36, 37, 43, 55, 62, 66, 70, 71, 77, 80
Global positioning technology, 74, 84

Hand-held
  devices, 19, 24
  computing devices, 87
  PDA, 84, 86
  systems, 25
  technologies, 19, 23, 26, 27
Handscape, 19, 20, 22, 27
HCI. *See* Human-computer interaction
Heidegger, M., 74
Hillier, B., 90, 93, 94, 96, 97
Human-centered design, 1. *See also* User-centered design
Human cognition, theory of, 74
Human-computer interaction (HCI), 1, 4, 6, 7, 9, 14, 19, 55, 73
  design, 1
  group at Cornell University, 4, 54, 73

Instant messaging, 55, 57, 58, 59, 60, 61, 64, 66, 77, 82. *See also* Chat tools
Integration, 95, 96, 97, 98, 100
Intel Corporation, 19, 54
Intelligent spaces, 96
Intelligibility, 95, 96, 97
Iterative design cycle, 11
  approach, 27, 73, 76
  process, 12, 16, 18

Just-in-time learning, 54

Kaptelinin, V., 2, 4, 5, 6
Kuutti, K., 2, 4, 71, 74

Lave, J., 4, 53
Learning conversations, 31, 32, 33, 49, 50, 51. *See also* Online learning conversations
Local-to-global integration, 95, 98
Location awareness, 76, 80, 82
Location-aware technology, 78. *See also* Context-aware computing

Macrosystems, 8
Mediating
  devices, 2, 4
  effects, 5
  factors, 83, 86
  functions, 14
  relationships, 5, 6
  role, 2, 4
  tools, 1, 2
Mesosystems, 8
Messaging, 22, 24, 26, 60. *See also* Chat tools; Instant messaging
  devices, 86
Microsoft, 54

Microsystems, 8
Mobile
 appliances, 26
 application, 20
 computing, 21, 24, 26, 55, 56, 59, 63, 71, 88
 devices, 22, 26
 technologies, 19, 21, 23–25, 28
Multitasking, 65
MUDs (multi-user domains), 31
MUSE, 76, 86, 87, 88
Museum ecologies, 33, 34, 35, 42

Nardi, B., 2, 4, 14, 53, 74
Nomad study, 54, 76, 77
Non-discursive
 regularities, 90
 techniques, 90, 95, 97
Norman, D., 7, 18, 73, 82

Online learning conversations, 31. *See also* Learning conversations

Pattern laws, 94
Phenomenology, 74
Pinch, T., 4, 11, 15, 16, 17
Practice of design, 2, 7
Preexisting social groups, 70. *See also* Relevant social groups

Reflection in action, 13
Relevant social groups, 17, 19, 24, 27. *See also* Preexisting social groups

SCOT. *See* Social, construction; Social, construction of technology framework; Social, constructivist
Semaphore system, 77, 78, 84
Situated action, theory of, 74
Social
 construction, 1, 4, 13, 15, 16
 construction of facts and artifacts, 4
 construction of technology framework, 15, 17, 19, 20, 28, 29
 constructivist, 15, 16, 27, 53
 conventions, 31, 42, 52
 navigation, 66, 67
 network analysis, 68
Spatial and temporal constraints, 55
 freedom from, 55, 56, 57
Spatial metaphor, 37
Stakeholders, 14, 16, 18, 19, 20, 23, 24, 25, 26, 27, 28
Suchman, L., 33, 74

Technology construction, 12
Technology design, 13, 14
Temptation, 55, 57, 64, 66, 82
Text-based conversations, 42
Trochim, W., 20

Ubiquitous computing, 53, 54, 74
Universal Distance metric (Hillier), 96
URL browsing, 60, 66. *See also* Social, navigation
 recommendation, 67
User-centered approach, 19
User-centered design, 18, 76
User knows best, model of, 18

Vygotsky L., 2

Way-finding
 applications, 21, 24
 features, 23
Wenger, 4, 53, 71, 72
Wireless mobile computing applications, 21, 24, 54, 71, 76
Wireless
 application, 23
 communication tools, 72
 mobile application, 20
 technology, 22, 24, 26, 57, 71
Wireless computer
 mediated learning environments, 53
 resources, 54, 71
 technology, 71