CONTENTS

| Lis | t of figures | xi |
|-----------|---|----|
| Lis | List of tables | |
| Ack | Acknowledgements | |
| No | Notes on contributors | |
| 1 | Introduction Eeva K. Kallio | 1 |
| PAI Ad | ता । ult cognitive and moral development | 7 |
| 2 | From multiperspective to contextual integrative thinking in adulthood: considerations on theorisation of adult thinking and its place as a component of wisdom <i>Eeva K. Kallio</i> | 9 |
| 3 | Integrating epistemic knowledge and logical reasoning skills in adult cognitive development Hannele Seppälä, Sari Lindblom-Ylänne, and Eeva K. Kallio | 33 |
| 4 | Personal epistemologies and social representations: and how they meet in people's conceptions of the origin of human species <i>Anna-Maija Pirttilä-Backman, Salla Ahola, and Inari Sakki</i> | 47 |
| 5 | Duties and responsibilities in adulthood: integrating care and justice perspectives Soile Junjärvi and Klaus Helkama | 63 |

x Contents

| 6 | Broadening the view of morality, and a study of moral development Jaana-Piia Mäkiniemi and Annukka Vainio | 78 |
|----|--|-----|
| | rspectives of adult learning | 95 |
| 7 | Adult learners and theories of learning Mari Murtonen and Erno Lehtinen | 97 |
| 8 | Developing learning and teaching practices for adults: perspectives from conceptual change and metacognition research <i>Mirjamaija Mikkilä-Erdmann and Tuike Iiskala</i> | 123 |
| 9 | Tacit knowledge and knowing at the core of individual and collective expertise and professional action <i>Auli Toom and Jukka Husu</i> | 141 |
| 10 | Professional expertise, integrative thinking, wisdom, and phronēsis Päivi Tynjälä, Eeva K. Kallio, and Hannu L. T. Heikkinen | 156 |
| | en questions and new approaches | 175 |
| 11 | Challenges in exploring individual's conceptions of knowledge and knowing: examples of research on university students <i>Heidi Hyytinen, Liisa Postareff, and Sari Lindblom-Ylänne</i> | 177 |
| 12 | Systems thinking and adult cognitive development Pirjo Ståhle, Laura Mononen, Päivi Tynjälä, and Eeva K. Kallio | 191 |
| 13 | Logical contradiction, contrary opposites, and epistemological relativism: critical philosophical reflections on the psychological models of adult cognitive development <i>Miira Tuominen and Eeva K. Kallio</i> | 208 |