

Larisa V. Shavinina
Editor

International Handbook on Giftedness

Part One

 Springer

Contents

Part I Introduction

- 1 Understanding Giftedness: Introduction or on the Importance of Seeing Differently** 3
Larisa V. Shavinina

Part II The Nature of Giftedness

- 2 The History of Giftedness Research** 17
Heidrun Stoeger
- 3 Essential Tensions Surrounding the Concept of Giftedness** 39
David Yun Dai
- 4 Contemporary Models of Giftedness** 81
Janet E. Davidson
- 5 A Feminine Perspective of Giftedness** 99
Linda Kreger Silverman and Nancy B. Miller
- 6 An Expert Performance Approach to the Study of Giftedness** 129
K. Anders Ericsson, Kiruthiga Nandagopal and Roy W. Roring
- 7 Debating Giftedness: Pronat vs. Antinat** 155
François Gagné
- 8 The Arbitrary Nature of Giftedness** 205
Nancy B. Hertzog
- 9 Gifted and Thriving: A Deeper Understanding of Meaning of GT** 215
Michael F. Sayler
- 10 A Unique Type of Representation is the Essence of Giftedness: Towards a Cognitive-Developmental Theory** 231
Larisa V. Shavinina

Part III The Neuropsychology of Giftedness

- 11 **Neuropsychological Characteristics of Academic and Creative Giftedness** 261
John G. Geake
- 12 **The Neural Plasticity of Giftedness** 275
M. Layne Kalbfleisch
- 13 **Working Memory, the Cognitive Functions of the Cerebellum and the Child Prodigy** 295
Larry R. Vandervert

Part IV Developmental and Cognitive Foundations of Giftedness

- 14 **Developmental Trajectories of Giftedness in Children** 319
Christoph Perleth and Annett Wilde
- 15 **Highly Gifted Young People: Development from Childhood to Adulthood** 337
Miraca U.M. Gross
- 16 **Talent Development Across the Lifespan** 353
Roger Moltzen
- 17 **Creative Cognition in Gifted Youth** 381
Katherine N. Saunders Wickes and Thomas B. Ward
- 18 **A Metacognitive Portrait of Gifted Learners** 397
Marion A. Barfurth, Krista C. Ritchie, Julie A. Irving and Bruce M. Shore

Part V Personality of the Gifted, Individual Differences, and Gender-Related Issues

- 19 **Personality Qualities That Help or Hinder Gifted and Talented Individuals** 421
Reva Friedman-Nimz and Olha Skyba
- 20 **Emotional Life and Psychotherapy of the Gifted in Light of Dabrowski's Theory** 437
P. Susan Jackson, Vicky F. Moyle and Michael M. Piechowski
- 21 **On Individual Differences in Giftedness** 467
Andrzej Sekowski, Malgorzata Siekanska and Waldemar Klinkosz
- 22 **A Theory of Talent Development in Women of Accomplishment** 487
Sally M. Reis and Erin E. Sullivan

Part VI Twice-Exceptional Gifted Individuals and Suicide-Related Issues

- 23 **Twice Exceptional: Multiple Pathways to Success** 507
Judy L. Lupart and Royal E. Toy
- 24 **Gifted Learners Who Drop Out: Prevalence and Prevention** 527
Michael S. Matthews
- 25 **Understanding Suicidal Behavior of Gifted Students: Theory, Factors, and Cultural Expectations** 537
Laurie A. Hyatt and Tracy L. Cross

Part VII Types of Giftedness

- 26 **In Search of Emotional-Social Giftedness: A Potentially Viable and Valuable Concept** 559
Reuven Bar-On and Jacobus G. (Kobus) Maree
- 27 **The Two Pioneers of Research on Creative Giftedness: Calvin W. Taylor and E. Paul Torrance** 571
Kyung Hee Kim
- 28 **Creative Giftedness: Beginnings, Developments, and Future Promises** . 585
James C. Kaufman, Scott B. Kaufman, Ronald A. Beghetto, Sarah A. Burgess and Roland S. Persson
- 29 **Imaginary Worldplay as an Indicator of Creative Giftedness** 599
Michele Root-Bernstein
- 30 **Development of Gifted Motivation: Longitudinal Research and Applications** 617
Adele Eskeles Gottfried and Allen W. Gottfried
- 31 **Leadership Giftedness: Is It Innate or Can It Be Developed?** 633
Karen B. Rogers

Part VIII Domain-Specific and Multiple Giftedness

- 32 **Scientific Talent: The Case of Nobel Laureates** 649
Larisa V. Shavinina
- 33 **Understanding Mathematical Giftedness: Integrating Self, Action Repertoires and the Environment** 671
Shane N. Phillipson and Rosemary Callingham
- 34 **Cinema Talent: Individual and Collective** 699
Dean Keith Simonton

-
- 35 Reading, Writing, and Raising the Bar: Exploring Gifts and Talents in Literacy** 713
Rachel Schnur and Sarah G. Marmor
- 36 The Elusive Muse: Understanding Musical Giftedness** 727
Roland S. Persson
- 37 Giftedness and Talent in Sport** 751
Jacques H.A. van Rossum
- 38 On Entrepreneurial Giftedness** 793
Larisa V. Shavinina
- 39 Ilk Hunting: Newbies, Cyberpunks, Coders and the Search for Elusive, Ego-Twisted, Talented Computer Hackers** 809
Thomas E. Heinzen and Louis M. Picciano
- 40 What Makes a Gifted Educator? A Design for Development** 825
Marion Porath
- 41 Understanding Managerial Talent** 839
Larisa V. Shavinina and Marianna Medvid
- 42 Multiple Giftedness in Adults: The Case of Polymaths** 853
• Robert Root-Bernstein

Larisa V. Shavinina
Editor

International Handbook on Giftedness

Part Two



Springer

Part IX Giftedness, Society, and Economy

- 43 Families of Gifted Children** 873
Abraham Reichenberg and Erika Landau
- 44 Large-Scale Socioeconomic, Political, and Cultural Influences on Giftedness and Talent** 885
Don Ambrose
- 45 Gifts, Talents, and Their Societal Repercussions** 905
Dean Keith Simonton
- 46 The Unwanted Gifted and Talented: A Sociobiological Perspective of the Societal Functions of Giftedness** 913
Roland S. Persson
- 47 On Giftedness and Economy: The Impact of Talented Individuals on the Global Economy** 925
Larisa V. Shavinina

Part X Assessment and Identification of Giftedness

- 48 The Measurement of Giftedness** 947
Linda Kreger Silverman
- 49 Identifying Academically Talented Students: Some General Principles, Two Specific Procedures** 971
David F. Lohman
- 50 The Johns Hopkins Talent Search Model for Identifying and Developing Exceptional Mathematical and Verbal Abilities** 999
Linda E. Brody
- 51 A New Approach to the Identification of Intellectually Gifted Individuals** 1017
Larisa V. Shavinina

Part XI Recent Advances in Gifted Education

- 52 New Developments in Gifted Education** 1035
Gary A. Davis
- 53 The English Model of Gifted Education** 1045
Deborah Eyre
- 54 Enhancing Creativity in Curriculum** 1061
Joyce VanTassel-Baska and Bronwyn MacFarlane
- 55 Acceleration: Meeting the Academic and Social Needs of Students** ... 1085
Nicholas Colangelo and Susan Assouline
- 56 Teaching for Wisdom in Public Schools to Promote Personal Giftedness** 1099
Michel Ferrari
- 57 DISCOVER/TASC : An Approach to Teaching and Learning That Is Inclusive Yet Maximises Opportunities for Differentiation According to Pupils' Needs** 1113
B. Wallace and C. J. Maker
- 58 Future Problem Solving in Gifted Education** 1143
Bonnie L. Cramond
- 59 Practical Intelligence and Wisdom in Gifted Education** 1157
Mary Anne Heng and Kai Yung (Brian) Tam
- 60 Recent Developments in Technology: Implications for Gifted Education** 1173
Michael C. Pyryt†

61 High Intellectual and Creative Educational Multimedia Technologies for the Gifted	1181
Larisa V. Shavinina	
62 A Technology-Based Application of the Schoolwide Enrichment Model and High-End Learning Theory	1203
Joseph S. Renzulli and Sally M. Reis	
63 The Iowa Online Advanced Placement Academy: Creating Access to Excellence for Gifted and Talented Rural Students	1225
Clar M. Baldus, Susan G. Assouline, Laurie J. Croft and Nicholas Colangelo	
64 On Bringing Interdisciplinary Ideas to Gifted Education	1235
Bharath Sriraman and Bettina Dahl	
65 Innovation Education for the Gifted: A New Direction in Gifted Education	1257
Larisa V. Shavinina	
66 Dual-Language Gifted Education and Its Evaluation	1269
Ernesto M. Bernal and Jaime H. García	
67 Observed Trends and Needed Trends in Gifted Education	1285
Michael F. Shaughnessy and Roland S. Persson	
Part XII Policy Implications and Legal Issues in Gifted Education	
68 United States Policy Development in Gifted Education: A Patchwork Quilt	1295
Joyce VanTassel-Baska	
69 Identifying and Developing Talent in Science, Technology, Engineering, and Mathematics (STEM): An Agenda for Research, Policy, and Practice	1313
Rena Subotnik, Martin Orland, Kristin Rayhack, Julie Schuck, Ashley Edmiston, Janice Earle, Edward Crowe, Pat Johnson, Tom Carroll, Daniel Berch and Bruce Fuchs	
70 Gifted Education and Legal Issues	1327
Frances A. Karnes and Kristen R. Stephens	
Part XIII Giftedness Research and Gifted Education Around the World: Institutional and Regional Examples	
71 Swimming in Deep Waters: 20 Years of Research About Early University Entrance at the University of Washington	1345
Kathleen D. Noble and Sarah A. Childers	

72	How Do You Get to Carnegie Hall? Gifted Education in New York City	1365
	Dona J. Matthews	
73	London Gifted and Talented: A Case Study in High Challenge Urban Education	1385
	Ian Warwick	
74	Giftedness and Diversity: Research and Education in Africa	1409
	Jacobus Gideon (Kobus) Maree and Carol Noëla van der Westhuizen	
75	Recent Developments in Gifted Education in East Asia	1427
	Shane N. Phillipson, Jiannong Shi, Guofeng Zhang, Den-Mo Tsai, Chwee Geok Quek, Nobutaka Matsumura and Seokhee Cho	
76	Gifted Education in the Arabian Gulf and the Middle Eastern Regions: History, Current Practices, New Directions, and Future Trends	1463
	Taisir Subhi-Yamin	
77	Gifted Education and Research on Giftedness in South America	1491
	Eunice M.L. Soriano de Alencar, Denise de Souza Fleith and Violeta Arancibia	
Part XIV Conclusions		
78	Research on Giftedness in the 21st Century	1509
	Albert Ziegler	
	Author Index	1525
	Subject Index	1529