

Contents

- 1 Autism Spectrum Disorders (ASD) and Technology 1**
 - 1.1 Introduction 1
 - 1.1.1 Dominant Theories in ASD 3
 - 1.1.2 Theory of Mind 3
 - 1.1.3 Executive Dysfunction 4
 - 1.1.4 Weak Central Coherence 5
 - 1.2 Characteristics of Individuals with ASD 6
 - 1.2.1 Perseveration 6
 - 1.2.2 Sensory Challenges and Motor Skills 7
 - 1.2.3 Expressive, Receptive, and Pragmatic Language Challenges 8
 - 1.2.4 Social Skills Deficits 9
 - 1.2.5 Problems with Working Memory 9
 - 1.2.6 Linear Execution 10
 - 1.2.7 Stereotypical Behavior 11
 - 1.2.8 Lack of Academic Motivation 11
 - 1.2.9 Problems with Reading Comprehension 12
 - 1.3 Technology and ASD 13
 - 1.4 Summary 13
 - 1.5 Discussion Points 13
- 2 Strategies for Supporting Students with ASD 15**
 - 2.1 Introduction 15
 - 2.1.1 Understanding ASD 15
 - 2.1.2 Perfectionist Tendencies 16
 - 2.1.3 Self-stimulatory Behavior 16
 - 2.1.4 Delayed Echolalia 17
 - 2.1.5 Meltdowns and Their Meaning 18
 - 2.1.6 Facilitating Positive Social Interaction 19
 - 2.1.7 Securing Compliance 20

2.2	Getting Qualified Support	21
2.2.1	Voting People off the Island	22
2.2.2	Sensory Issues	22
2.2.3	Using Direct Language.	22
2.2.4	Using Positive Reinforcement	23
2.2.5	Gaining the Learner's Attention	23
2.2.6	Understanding the Theories that Attempt to Explain ASD.	23
2.2.7	Learning to Handle Non-preferred Activities.	24
2.3	Applications of Technology	25
2.4	Summary	27
2.5	Discussion Points	27
3	Family Issues in ASD.	29
3.1	Introduction	29
3.1.1	Increased Stress	29
3.1.2	Educational Challenges	31
3.1.3	The Future	34
3.1.4	Sibling Issues	35
3.1.5	Parental Involvement in Educational and Therapy Programs.	35
3.1.6	Behavior of the Child with ASD	36
3.2	Use of Technology	37
3.3	Summary	39
3.4	Discussions Points	39
4	Technology-Created Visual Support	41
4.1	Introduction	41
4.1.1	Examples of Worksheets Created with Applications Software for Learners with ASD	42
4.1.2	Summary	58
4.1.3	Discussion Points	58
5	Technologies to Facilitate Communication, Social Skill Development, Diagnostic Reporting, and Learning	59
5.1	Introduction	59
5.1.1	Applications of Video-Modeling	62
5.2	Augmentative and Alternative Communication	65
5.3	Robotics	67
5.4	Virtual Reality	69
5.5	Telepractice/Teletherapy.	70
5.6	Video Games	71
5.7	Summary	71
5.8	Discussion Points	72

6 The Need for Support, Learning Environments, and Technology Use 73

6.1 Introduction 73

6.1.1 Problems in ASD that Require Support 73

6.2 Learning Environments in ASD 76

6.3 The Use of Technologies in ASD 78

6.4 Summary 79

6.5 Discussion Points 79

Appendix A: Practical Tips for Assisting Learners with ASD 81

Appendix B: Chapter Resources 85

References 89

Index 99

Technology for Learners with Autism Spectrum
Disorders

Ennis-Cole, D.L.

2015, XV, 99 p. 18 illus., 17 illus. in color., Hardcover

ISBN: 978-3-319-05980-8