Applied Behavior Analysis

Kimberly Maich
Darren Levine
Carmen Hall

Applied Behavior Analysis

Fifty Case Studies in Home, School, and Community Settings

Springer

Kimberly Maich
Department of Teacher Education
Brock University
St. Catharines, ON
Canada

Darren Levine
Brock University
St. Catharines, ON
Canada

Carmen Hall
Fanshawe College
London, ON
Canada

ISBN 978-3-319-44792-6 ISBN 978-3-319-44794-0 (eBook)
DOI 10.1007/978-3-319-44794-0

Library of Congress Control Number: 2016949108

© Springer International Publishing AG 2016
This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.
The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.
The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made.

Printed on acid-free paper

This Springer imprint is published by Springer Nature
The registered company is Springer International Publishing AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Preface

Applying the Science of Behavior Across the Life span

The purpose of this publication is to provide ready-to-use case studies to accompany current academic textbooks and field training materials used by students and professionals studying, teaching, and working in the field of Applied Behavior Analysis (ABA). Through 50 case studies, learners are provided opportunities to apply ABA principles, processes, and practices to a range of scenarios across the life span. These scenarios offer a simulated platform for learners to design, implement, and evaluate behavior-change programs for children, adolescents, adults, and seniors across a range of home, school, and community settings.

The case studies within this work reflect the field experience of the authors as well as that of the academic faculty, field-based professionals, and students that contributed to the development of this valuable resource. Each case encourages users to reflect on, and think critically about, selected concepts and principles of ABA. When combined, the 50 cases within this text guide learners through the phases of behavior-analytic practice—from assessment and planning through implementation and evaluation—while offering a range of research and ethical considerations central to the science and practice of behavior analysis.

Supporting a Multidisciplinary Scientist-Practitioner Perspective

The cases offered challenge users to consider how to address complex behavior difficulties from the perspective of a scientist-practitioner (Hayes et al. 1999), giving consideration to evidence-informed practice, measurement and evaluation, and the production of new knowledge and understanding obtained through the delivery of services. Learners are guided, as well, to consider the interplay of biological, psychological, and social variables, while developing prevention, skill building, and intervention components of behavior-change programs. The case

studies presented in this text further encourage learners to reflect on technical, interpersonal, and leadership challenges and opportunities associated with the translation of scientific principles into effective behavior-change programs.

Emphasizing Each Phase of Behavior-Analytic Practice

This publication is comprised of five parts: assessment, planning, implementation, evaluation, and research and ethics. Each part is subdivided into chapters focusing on either preschool to school-age or adolescence to adulthood. Each chapter is then made up of five cases, each with a unique focus and setting, supported by a guiding learning objective, Behavior Analyst Certification Board (BACB) task list links and Professional and Ethical Compliance Code, key terms, application and reflection questions, and links to Web-based resources.

A Valuable Resource for Both Academic- and Field-Based Professionals

This text offers a valuable ready-to-use resource for academic- and field-based professionals. The wide range of cases provided across the life span offer applied learning and professional development opportunities for students and practitioners in a multitude of disciplines. Examples include ABA, special education, disability studies, early childhood education, primary and secondary education, gerontology, and organizational behavior management.

Within academic contexts, these case studies offer students in college and university programs at the diploma, undergraduate, and graduate degree levels, a process to support the fusion of theoretical and practical components of ABA. Within service delivery contexts, this text offers a practical professional development resource for individuals or teams new to behavior analysis-based services, as well as a valuable refresher for more seasoned professionals. Case studies can be completed by individual practitioners as part of individualized professional development or supervision programs, or alternatively completed simultaneously by whole teams to support group learning and development.

Included in each chapter are sample figures, graphs, and templates. Exercises in each chapter offer hands-on activities to apply skills and complete exercises based on the case study and in online environments. Examples include visual displays of behavior data, behavior data sheet templates, and behavior assessment forms. These resources offer learners the opportunity to conduct simulated behavior assessment, data collection, data graphing, and data analysis activities: key components and hallmarks of ABA practice.

Highlighting the Standards of the Behavior Analyst Certification Board

Each case presented in this text includes links to the BACB Fourth Edition Task List (BACB 2012) including foundational knowledge, basic skills, and client-centered responsibilities. This feature makes this text a valuable resource for those preparing for future certification as Board Certified Behavior Analysts (BCBA) and Board Certified Assistant Behavior Analysts (BCaBA). Both the BCBA and BCaBA examinations are linked to the task list, and the structure, format, and content of each case offer learners opportunities to review definitions and applications of key terms, concepts, principles, and processes across the life span. In addition, embedded throughout the text and emphasized in Part V (Research and Ethics) are components of the BACB's Professional and Ethical Compliance Code for Behavior Analysts (Behavior Analyst Certification Board 2014). Complex ethical dilemmas arise frequently in ABA practice and research. The opportunity for students and practitioners to reflect on ethical standards and consider professional conduct through the simulated platform offered by this text is critical to ensuring high-quality services and the well-being of those supported by ABA practitioners.

Enhancing Student Engagement and Learning

Case-based pedagogy has been used across a range of disciplines (e.g., preservice teacher education, law, business, medicine, and engineering) to support the practical application of knowledge acquired in classroom settings (Neuhardt-Pritchett et al. 2004). Supplementing traditional teaching practices with case-based learning experiences has been shown to increase student exposure to real-world clinical cases (e.g., Wilson et al. 2015), and enhance students' problem solving and application skills (e.g., Hoag et al. 2001; Lee et al. 2009). Case-based approaches have further been found to result in more active learning, greater critical thinking, comprehension, and higher-order thinking skills, when compared to more traditional lecture-based approaches (e.g., Rybarczyk et al. 2007; Yadav et al. 2010). Further, they offer a mechanism by which to increase student interest and engagement (e.g., Lee et al. 2009; Tarnvik 2007), stimulate group learning and discussion, and have been well received by academic students and faculty (e.g., Flynn and Klein 2001; Srinivasan et al. 2007).

Supporting Tomorrow's Leaders

Applied Behavior Analysis: Fifty Case Studies in Home, School, and Community Settings is a valuable companion resource for those studying, teaching, and working in the field of ABA. Leading and guiding the implementation of ABA-based programs with, in many cases, vulnerable populations experiencing complex challenging behaviors, requires skills beyond an understanding of theoretical principles. Ongoing opportunities are needed to reflect on roles as part of multidisciplinary teams, the complex contextual considerations within home, school, and community settings, and the tact, diplomacy, and sensitivity needed to support individuals experiencing challenging behaviors and their families and caregivers. This text provides a springboard for this learning, and in doing so, is a critical resource for tomorrow's leaders in ABA.

St. Catharines, Canada Kimberly Maich
St. Catharines, Canada Darren Levine
London, Canada Carmen Hall

References

Behavior Analyst Certification Board. (2012). *Fourth edition task list.* Retrieved from http://bacb.com/wp-content/uploads/2016/03/160101-BCBA-BCaBA-task-list-fourth-edition-english.pdf

Behavior Analyst Certification Board. (2014). *Professional and ethical compliance code for behavior analysts.* Retrieved from http://bacb.com/wp-content/uploads/2016/03/160321-compliance-code-english.pdf

Flynn, A., & Klein, J. (2001). The influence of discussion groups in a case-based learning environment. *Educational Technology Research and Development*, *49*(3), 71–86.

Hayes, S., Barlow, D., & Nelson-Gray, R. (1999). *The scientist-practitioner: Research and accountability in the age of managed care* (2nd ed.). Boston: Allyn & Bacon.

Hoag, A., Brickley, D., & Cawley, J. (2001). Media management education and the case method. *Journalism and Mass Communication Educator*, *55*(4), 49–59.

Lee, S., Lee, J., Liu, X., Bonk, C., & Magjuka, R. (2009). A review of case-based learning practices in an online MBA program: A program-level case study. *Educational Technology and Society, 12*(3), 178–190.

Neuhardt-Pritchett, S., Payne, B. D., & Reiff, J. C. (Eds.). (2004). *Diverse perspectives on elementary education: A casebook for critically analyzing issues of diversity*. Needham Heights, MA: Allyn & Bacon.

Rybarczyk, B., Baines, A., McVey, M., Thompson, J., & Wilkins, H. (2007). A case based approach increases student learning outcomes and comprehension of cellular respiration concepts. *Biochemistry and Molecular Biology Education, 35*(3), 181–186.

Srinivasan, M., Wilkes, M., Stevenson, F., Nguyen, T., & Slavin, S. (2007). Comparing problem-based learning with case-based learning: Effects of a major curricular shift at two institutions. *Academic Medicine, 82*(1), 74–82.

Tarnvik, A. (2007). Revival of the case method: a way to retain student-centred learning in a post-PBL era. *Medical Teacher, 29*(1), 32–36.

Wilson, A., Goodall, J., Ambrosini, G., Carruthers, D., Chan, H., Ong, S., et al. (2015). Development of an interactive learning tool for teaching rheumatology—A simulated clinical case studies program. *Rheumatology, 45*(9), 1158–1161.

Yadav, A., Shaver, G., & Meckl, P. (2010). Lessons learned: Implementing the case teaching method in a mechanical engineering course. *The Research Journal for Engineering Education*, *99*(1), 55–69.

Acknowledgments

I would like to acknowledge my husband, John, and my children, Robert, Grace, and Hannah. for their collective tolerance for my long-term, time-consuming projects. They are my world, they have changed my world, and they are reflected in many small and significant ways in the narratives in this book—and others. Thank you to Brock University for my ABA training and to Carmen Hall for my ABA supervision which helped to support the direction of this book. All of the guest authors who contributed cases to this book also have my thanks for graciously contributing their creativity and time. My research assistants—Megan Henning, Susan Riecheld, and Sheri Mallabar—are also gratefully thanked for their time and energy in supporting its final steps toward submission. And, of course, to my co-authors Darren Levine and Carmen Hall: Thank you immensely for agreeing to be a huge, significant, unbeatable part of this journey. Let's do it again!

—Kimberly Maich

I would like to thank my wife Jen for her unwavering patience, support, encouragement, and belief in me. I would also like to express my gratitude to our three children, Maya, Noah, and Aiden. You are all a constant source of inspiration and a reminder never to take myself too seriously and that nothing is impossible. Thank you to my co-authors Kimberly Maich and Carmen Hall. This has been an exciting and rewarding journey!

—Darren Levine

I would like express my overwhelming gratitude to my husband, Tony, and son, Julian, in their patience, dedication, and commitment to this book, which took away from some of the time together as a family. Your belief in my career and me is unconditional and inspiring. Also, to all the friends and extended family who also contributed in many, many ways so that this book is possible—thank you! Special thanks to Erin Marshall for her dedication and commitment to helping bring some of our case studies to life and making them applicable to field settings. Lastly, I cannot thank the other authors on this team enough who pulled together time after time to make this project come to fruition!

—Carmen Hall

Contents

Part I Assessment

1 Assessment Case Studies for Preschool to School-Age Children . . . 3
CASE: i-A1. . . . 4
Why Won't Simon Listen to Me? . . . 5
CASE: i-A2. . . . 10
Why Can't Erin Just Get Along? . . . 12
CASE: i-A3. . . . 19
What is Cyrus Trying To Tell Us? . . . 20
CASE: i-A4. . . . 26
Why Won't Serena Just Let Me Teach? . . . 27
CASE: i-A5 Guest Author: Monique Somma . . . 35
Where Did Siki Learn to Say That? . . . 36
References. . . . 42

2 Assessment Case Studies from Adolescence to Adulthood . . . 45
CASE: i-A6. . . . 46
Emily's Worrying is Keeping Her Awake. . . . 47
CASE: i-A7. . . . 55
Sam's Struggles with "Real-Life" Friends. . . . 56
CASE: i-A8. . . . 61
Olivier's Challenges with Self-control. . . . 62
CASE: i-A9. . . . 67
Miguel Used to Skip TO School, But Now He Is SKIPPING School! . . . 68
CASE: i-A10. . . . 77
If Jaz Can't Get Here on Time, She Is Fired! . . . 78
References. . . . 81

Part II Planning

3 Planning-Focused Case Studies for Preschool-Age to School-Age Children 85
CASE: ii-P1 86
We All Are Experts, But None of Us Alone Has All the Expertise . . . 87
CASE: ii-P2 Guest Author: Adam Davies 91
Change is Needed, But Who Is It That Has to Change? 93
CASE: ii-P3 99
You Mean You Want to Train My Student? 100
CASE: ii-P4 105
Zara's Ounce of Prevention 106
CASE: ii-P5 110
Let's Just Make Zara Stop 112
References 117

4 Planning-Focused Case Studies from Adolescence to Adulthood 119
CASE: ii-P6 119
Why Does Jana Struggle in Some Places, And Not Others? 121
CASE: ii-P7 126
Changing Ilyas's Outcomes by Changing His Environment 127
CASE: ii-P8 131
Shape Up, Cris, Or Ship Out! 132
CASE: ii-P9 Guest Author: Christina Belcher 140
Is Garth's Experience Enough? 141
CASE: ii-P10 146
Is Daisy's Behavior a Message in Disguise? 148
References 152

Part III Implementation

5 Implementation-Based Case Studies for Preschool-Age to School-Age Children 157
CASE: iii-I1 158
Important for ME, Or Important for YOU? 160
CASE: iii-I2 163
Robina's Data Are WRONG; My EXPERIENCES Are Right 165
CASE: iii-I3 169
Let's Just Get Moving Along! 171
CASE: iii-I4 175
When Is "ENOUGH"? 177
CASE: iii-I5 182
Big Changes for Bart, But Perhaps of Little Value? 184
References 188

6 Implementation-Based Case Studies from Adolescence to Adulthood . . . 191
CASE: iii-I6 . . . 192
Right, Wrong, or Different? . . . 193
CASE: iii-I7 . . . 198
Jerry Just Needs to Learn a Lesson . . . 199
CASE: iii-I8 Guest Author: Drew MacNamara . . . 204
It's Just Too Time-consuming. I'm Pretty Sure That Things Are Getting Better. Is That Enough? . . . 205
CASE: iii-I9 . . . 210
It Only Happens to Sophia When These People Are Here! . . . 212
CASE: iii-I10 . . . 216
I Wish Hilde Could Just Tell Us! . . . 218
References . . . 225

Part IV Evaluation

7 Evaluation-Centered Case Studies for Preschool to School-Age Children . . . 229
CASE: iv-E1 Guest Author: Jocelyn Prosser . . . 229
My Teaching Strategies Are Working! Aren't They? . . . 231
CASE: iv-E2 . . . 237
It's Working for Tito … Right? . . . 239
CASE: iv-E3 . . . 244
It's Just Not Happening with Owen! . . . 245
CASE: iv-E4 . . . 252
As Long as Molly's Improving, Nothing Else Matters . . . 253
CASE: iv-E5 . . . 258
How Is It a Success for Ramsey, When WE Aren't Seeing Any Change? . . . 259
References . . . 265

8 Evaluation-Centered Case Studies from Adolescence to Adulthood . . . 267
CASE: iv-E6 . . . 267
I Think It Is Fair To Say That This Is Working! . . . 269
CASE: iv-E7 . . . 275
Does It Matter WHAT Worked? . . . 276
CASE: iv-E8 . . . 284
We Cannot Evaluate Our Program! . . . 285
CASE: iv-E9 . . . 287
It Worked for Them; It Will Work for Us . . . 288
CASE: iv-E10 Guest Authors: Sharon Jimson and Renee Carriere . . . 293
Raja's Decreasing Disruptive Behavior . . . 294
References . . . 306

Part V Research and Ethics

9 Preschool-to-School-Age Case Studies Constructed Around Research and Ethics 311
CASE: v-R1 Guest Author: Tricia van Rhijn 312
Stay, Play, and Talk with Me 312
CASE: v-R2 319
Show Me The Evidence 320
CASE: v-R3 327
Volunteered or Volun-*told*? 328
CASE: v-R4 331
Settle In—Or Opt Out? 332
CASE: v-R5 336
Ask for Permission, or Ask for Forgiveness? 338
References 342

10 Adolescence to Adulthood Case Studies Constructed Around Research and Ethics 343
CASE: v-R6 Guest Author: John LaPorta 344
Include or Exclude? 344
CASE: v-R7 347
Malcolm's in the Middle 348
CASE: v-R8 353
Skilled Practice or Practice Skills? 355
CASE: v-R9 361
What's Wrong with a Little Deception? 362
CASE: v-R10 366
Include or Exclude? 366
References 371

Ethics Index 373

BACB 4th Edition Task List Index 377

Copyright Acknowledgements 383

Index 385

About the Authors

Kimberly Maich, Ph.D., OCT, is an associate professor in the Department of Teacher Education at Brock University and affiliated with the Center for Applied Disability Studies. She has studied and taught from coast-to-coast in Canada from Vancouver, BC, to St. Anthony, NL. She has spent most of her career as a resource teacher, supporting students with exceptionalities from Kindergarten to Grade 12, but has also worked as a guidance counselor, vice-principal, librarian, classroom teacher, and computer laboratory coordinator. Previously, she worked as an ASD Consultant and Program Coordinator with McMaster Children's Hospital. Before moving to Brock University, she was a professor in Fanshawe College's new Bachelor of Applied Arts in Early Childhood Leadership. Her primary interests lie in special education, primarily in autism spectrum disorders.

Darren Levine, Ed.D., is an adjunct faculty member in the Center for Applied Disability Studies at Brock University. He has taught graduate-level courses in Applied Behavior Analysis and supported student research and field-based learning and development. For more than fifteen years, Dr. Levine has held several progressively more senior positions implementing Applied Behavior Analysis intervention programs in home, school, and community settings, and conducting applied behavior-analytic measurement, evaluation, and research. Dr. Levine holds a doctorate in education from the Ontario Institute for Studies in Education at the University of Toronto (OISE/UT), specializing in adaptive instruction and special education.

Carmen Hall, MC, CCC, BCBA, has worked in the field of Autism Spectrum Disorders for more than 10 years, in both educational and clinical settings. She graduated from the University of Calgary (BA, Psychology), St. Lawrence College (Behavioural Science Technology Diploma), the University of Lethbridge (MC, Counseling Psychology), and is currently completing her Ph.D. in Clinical Psychology from Saybrook University. She is a Certified Canadian Counselor with the Canadian Counseling and Psychotherapy Association and is a Board Certified Behavior Analyst. Her primary focus has been on promoting and researching social

skill development for children with disabilities in inclusive recreation, educational, and childcare settings, researching the use of the iPad to facilitate learning in K-Higher Education and the use of intensive ABA strategies for adults with developmental disabilities. Carmen has worked as an instructor therapist, educational assistant, and autism spectrum disorders consultant and is currently the Coordinator of the Autism and Behavioural Science Program at Fanshawe College. She regularly presents at provincial, national, and international conferences, and in 2013 was named an Apple Distinguished Educator, in 2014 received the College Sector Educator Award, and in 2015 received the President's Distinguished Achievement Award.