

DESIGN LEARNING FOR BEHAVIOR CHANGE

JULIE DIRKSEN



FREE SAMPLE CHAPTER | 1 1 10 10

VOICES THAT MATTER™

TALK TO THE ELEPHANT

DESIGN LEARNING FOR BEHAVIOR CHANGE

JULIE DIRKSEN



TALK TO THE ELEPHANT Design Learning for Behavior Change

Julie Dirksen

New Riders

Find us on the Web at voicesthatmatter.com. New Riders is an imprint of Peachpit, a division of Pearson Education. To report errors, please send a note to errata@peachpit.com.

Copyright © 2024 by Julie Dirksen

Executive Editor: Laura Norman Project Editor: Charlotte Kughen Proofreader: Sarah Kearns Technical Editor: Paul Chadwick Compositor: Bronkella Publishing LLC Indexer: Johnna Vanhoose Dinse Graphics: tj graham art Cover Design: Chuti Prasertsith Interior Design: Danielle Foster

NOTICE OF RIGHTS

All rights reserved. No part of this book may be reproduced or transmitted in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. For information on getting permission for reprints and excerpts, contact permissions@peachpit.com.

NOTICE OF LIABILITY

The information in this book is distributed on an "As Is" basis without warranty. While every precaution has been taken in the preparation of the book, neither the author nor Peachpit shall have any liability to any person or entity with respect to any loss or damage caused or alleged to be caused directly or indirectly by the instructions contained in this book or by the computer software and hardware products described in it.

TRADEMARKS

Many of the designations used by manufacturers and sellers to distinguish their products are claimed as trademarks. Where those designations appear in this book, and Peachpit was aware of a trademark claim, the designations appear as requested by the owner of the trademark. All other product names and services identified throughout this book are used in editorial fashion only and for the benefit of such companies with no intention of infringement of the trademark. No such use, or the use of any trade name, is int-ended to convey endorsement or other affiliation with this book.

ISBN-13: 978-0-13-807368-8 ISBN-10: 0-13-807368-6 **\$PrintCode**

CREDITS

CREDITS

Cover: krisnass/Shutterstock, KatyGr5/Shutterstock Cover: Silhouette MaryLB/iStock.com Chapter openers: krisnass/Shutterstock Ch 1, African elephant isolated on white background: pandapaw/Shutterstock Ch 1, goggles or safety glasses: Alexapicso/Shutterstock Ch1, phone cell Smart Mobile 3D and 2D: roywylam/123RF Ch 1, elephant in front of a white background: Eric Isselee/Shutterstock Ch 1, young baby elephant sit down: dumrongsak/123RF Ch 1, green swimsuit: maradon 333/Shutterstock Ch 2, crumpled plastic bottle with clipping path: schab/Shutterstock Ch 2, half a bottle of milk: OB production/Shutterstock Ch 2, economic icons: Nevada31/Shutterstock Ch 2, medical test with pen in flat style: Lovecta/Shutterstock Ch 2, looking for an employee: Nadia Snopek/Shutterstock Ch 2, smiling elderly lady standing arms crossed: nyul/123RF Ch 2, smiling delivery man : gualtiero boffi/Shutterstock Ch 2, teenager boy soccer player: Catalin Petolea/Shutterstock Ch 2, elephant in river in Serengeti National Park: Eric Isselee/Shutterstock Ch 3, man with spastic infantile cerebral pals: belahoche/123RF Ch 3, 12, diversity people group team union concept: Rawpixel.com/Shutterstock Ch 3, business people meeting discussion: rawpixel/123RF Ch 3, young student girl: carballo/Shutterstock Ch 4, excited crowd of people at a soccer stadium: Koson/Shutterstock Ch 4, young male African elephant feeding, using trunk: Judy Whitton/Shutterstock Ch 4, set of cartoon characters relaxing: zuperia/Shutterstock Ch 4,10, seesaw - colored balance toy set: Peter Hermes Furian/Shutterstock Ch 4, African elephant isolated on white: Vaclav Volrab/123RF Ch 4, elephant: Richard Peterson/Shutterstock Ch 4, the cigarette isolated on a white background: Voronina Svetlana/Shutterstock Ch 4, fitness and health icons high detailed vector set: andegro4ka/123RF Ch 4, copy document icon: Arafat Uddin/Shutterstock Ch 4, elephant on a white background: sevenke/Shutterstock Ch 4, glass of water spilled on wooden table: Africa Studio/Shutterstock Ch 4, icons set fitness: Kapreski/Shutterstock Ch 4, intimidating boot camp fitness trainer with adult class outdoors: CREATISTA/Shutterstock Ch 4, Asia elephant on isolated white background: Judy Whitton/Shutterstock Ch 4, a picture of an office worker: Kingmaya Studio/Shutterstock Ch 4, performance evaluation form: alexskopje/Shutterstock Ch 4, female college student meeting: Monkey Business Images/Shutterstock Ch 4, smiling young African female entrepreneur: Flamingo Images/Shutterstock Ch 4, happy mature business man: Rido/Shutterstock Ch 4, happy mature business man holding spectacles: Rido/Shutterstock Ch 4, well-dressed young Asian: mavo/Shutterstock Ch 5, LED light bulb isolated on white: Robert Bertold/Shutterstock Ch 5, young happy female coach: Drazen Zigic/Shutterstock Ch 5,6, African farmer stand in the green farm: arrowsmith2/Shutterstock Ch 5, a young Indian Asian woman: mentatdgt/Shutterstock Ch 5, tired woman at home office looking at her watch: Leszek Glasner/Shutterstock Ch 5, 7, construction worker measuring tile: Africa Rising/Shutterstock Ch 5, coach with digital tablet: Monkey Business Images/Shutterstock Ch 5, Illustration of basketball: MSSA/Shutterstock Ch 5, fit people ready to rock climb at the gym: Wavebreak Media Ltd/123RF Ch 5, the American gray squirrel paw anxiously pressed to his chest: IrinaK/Shutterstock Ch 5, dog resting at the river child drawing: s_oleg/Shutterstock Ch 5, lesson class education study teaching concept: Rawpixel.com/Shutterstock

CREDITS

Ch 5, empty seesaw: Vaniato/Shutterstock Ch 5, being rude, refusing help concept: KieferPix/Shutterstock Ch 5, shot of a warehouse worker: Gorodenkoff/Shutterstock Ch 5, worker with safety equipment: Kitawit Jitaton/Shutterstock Ch 5, happy multiethnic family: Ground Picture/Shutterstock Ch 5, beautiful lotus flower in waterfall pool. Vietnam: Khoroshunova Olga/Shutterstock Ch 5, gesture of a beautiful woman hand washing her hands: caimacanul/Shutterstock Ch 5, gloves, mask, and safety glasses for personal protection: Sherry Yates Young/Shutterstock Ch 5, portrait of Asian female doctor wearing PPE suit: People Image Studio/Shutterstock Ch 5, washing hands at sink: Stuart Cox/Pearson Education Ltd Ch 5, no drugs concept vector illustration: Blueastro/Shutterstock Ch 5, close up of African female athlete: koldo_studio/Shutterstock Ch 6, graphic of the Behaviour Change Wheel: Springer Nature Ch 6, young plant with watering can and water drops, isolated on white: Drogatnev/Shutterstock Ch 6, hand holding (filming or shooting) a smart phone: piotr_pabijan/Shutterstock Ch 6, Moe and their partner Kai: Disabled and Here Ch 7, closeup portrait of handsome cocky guy with big black glasses: AshTproductions/Shutterstock Ch 7, classic analog clock pointing at 8 o'clock: szefei/Shutterstock Ch 7, Asian elephant female: Jan Havlicek/123RF Ch 7, set of African American male hand: Prostock-studio/Shutterstock Ch 7, organized tools on wall for maintenance: Mathisa/Shutterstock Ch 7, waste recycling plant: Dmitry Markov152/Shutterstock Ch 7, interior of a modern dental clinic: robeo/123RF Ch 7, beautiful violin isolated on a white background: cynoclub/123RF Ch 7, emergency exit seat closeup shot: FOTOAMP/Shutterstock Ch 7, green city concept, cut the leaves of plants, isolated over white: kav777/123RF Ch 7, portrait of senior man gardener working with lawn mower: bambulla/123RF Ch 7, young factory worker controlling the work: pressmaster/123RF Ch 7, couple of surgeons washing hands: santypan/Shutterstock Ch 8, portrait of medical team at nurses station: Monkey Business Images/Shutterstock Ch 9, 10,11,12,14, multinational business team: Nadya_Art/Shutterstock Ch 9, collection of people with pets: GoodStudio/Shutterstock Ch 9, doctor checkup male patient in bed and nurse woman looking: Blaj Gabriel/Shutterstock Ch 10, African elephant isolated on white: vencavolrab78/123RF Ch 11, 12, African American black woman: Flash Vector/Shutterstock Ch 11, rolled carpet isolated on white background: serezniy/123RF Ch 11, Freedom Trail end at Bunker Hill Monument: aphotostory/Shutterstock Ch 12, professional workers standing together: elenabsl/Shutterstock Ch 12, yellow construction helmet four views isolated on white: Zelfit/Shutterstock Ch 12, builders with building equipment and plan vector: Se_vector/Shutterstock Ch 13, electrical shock hazard symbol: Anastasia Averina/Shutterstock Ch 14, business multinational team: Nadya_Art/Shutterstock Ch 14, group of multicultural students flat vector illustration: GoodStudio/Shutterstock Ch 15, curriculum guide cover: Picture Impact, Julie Visco Ch 15, empathy map: Picture Impact Ch 15, women facing different paths: Picture Impact, Alfred Ombati Ch 15, photo of classroom with different worksheet: Picture Impact Ch 15, app screenshot of Sport integrity Australia: Commonwealth of Australia Ch 15, Anti-Doping, screenshot of Sport integrity Australia: Commonwealth of Australia Ch 15, screenshot of Sport integrity Australia, YouTube: Commonwealth of Australia Ch 15, screenshots of Harness Hero game: Brian Kaleida, CEO of Sigma Games, LLC Ch 15, screenshots of VALOR Nigeria Instagram feed: Manya Dotson Ch 16, cuddling elephant and baby elephant: aiisha5/123RF

PEARSON'S COMMITMENT TO DIVERSITY, EQUITY, AND INCLUSION

Pearson is dedicated to creating bias-free content that reflects the diversity of all learners. We embrace the many dimensions of diversity, including but not limited to race, ethnicity, gender, socioeconomic status, ability, age, sexual orientation, and religious or political beliefs.

Education is a powerful force for equity and change in our world. It has the potential to deliver opportunities that improve lives and enable economic mobility. As we work with authors to create content for every product and service, we acknowledge our responsibility to demonstrate inclusivity and incorporate diverse scholarship so that everyone can achieve their potential through learning. As the world's leading learning company, we have a duty to help drive change and live up to our purpose to help more people create a better life for themselves and to create a better world.

Our ambition is to purposefully contribute to a world where:

- Everyone has an equitable and lifelong opportunity to succeed through learning.
- Our educational products and services are inclusive and represent the rich diversity of learners.
- Our educational content accurately reflects the histories and experiences of the learners we serve.
- Our educational content prompts deeper discussions with learners and motivates them to expand their own learning (and worldview).

While we work hard to present unbiased content, we want to hear from you about any concerns or needs with this Pearson product so that we can investigate and address them.

• Please contact us with concerns about any potential bias at https://www.pearson. com/report-bias.html.

ACKNOWLEDGMENTS

For supporting this book and holding the ship steady as we speak: Laura Norman at Pearson/Peachpit and Charlotte Kughen at The Wordsmithery LLC. I'm sorry I've been giving you gray hair, Charlotte, but thank you so much for all you are doing. Thanks also to the talented team of folks who pulled all the individual graphic and design pieces together to turn them into this book.

For technical editing and invaluable insight: Paul Chadwick from UCL Centre for Behaviour Change. Your input has been invaluable (mistakes are my own), and I so appreciate you agreeing to take this on.

For collaboration, insight, and education: Dustin DiTommaso, the smartest person I know on digital behavior-change interventions, and my favorite workshop collaborator. This book wouldn't exist in this form without all I've learned from you (including your knowledge of the best places to get cocktails in most cities).

For helping wrangle myriad details and being excellent friends and colleagues: Ann Woods and Brian Dusablon.

For providing the models and workshops that did the most to inform this book and my practice: Susan Michie, Lou Atkins, and Robert West and the folks from UCL Centre for Behaviour Change.

For inspiration and making time for interviews: Katrina Mitchell from Picture Impact, Manya Dotson from JHPIEGO, Australia Alexis Cooper and Shelly Chard from Sports Integrity Australia (double thanks, ladies, for your patience and help with technical errors), Dustin (again) and Paul (again), Brian Kaleida from Simcoach Games, Sebastian Bailey from MindGym, Michelle Segar from the University of Michigan, Christian Hunt from Human Risk, Roberta Dombrowski from Learn Mindfully, John Cutler of The Beautiful Mess, and Matt Wallaert from BeSci.io.

For reviewing chapters or advising on case examples or contributing generally: Matt Richter, Mark Lassoff, Jeff Dalto, Susi Miller, Sarah Mercier, and Jim Billings. I'm grateful to know so many smart and kind people.

Also thanks to the Learning Guild folks: Jane Bozarth, David Kelly, and Mark Britz, and also Justin Brusino and the other great people at ATD.

To the Wednesday maker night crew: Heidi Harris Mathews, Tracy Parish, Kristen Hayden Safdie, Judy Katz, and Jane (again) for being indefatigable supporters and sounding boards. You got me through lockdown and more.

Thanks and love to my professional peoples for all the help and advice and community: Bianca Woods, Becca Wilson, Jennifer Solberg, Steve Howard, Sarah (again), Wendy Wickham, Koreen Olbrish Pagano, Trina Rimmer, Maria Andersen, Kevin Thorn, Edmond Manning, Megan Torrance, Diane Elkins, Karl Kapp, Zsolt Olah, Jason Bickle, Ellen Wagner, Connie Malamed, and Emma Weber. And thanks to Tom Kuhlmann—if not for your support for the first book, there might not have been a second book.

To my evidence-to-practice compatriots: Clark Quinn, Will Thalheimer, Jane (again), Patti Shank, and Mirjam Neelen. And to my mentors always—Kathy Sierra and Michael Allen. Also, thanks to Simon Rosser at the University of MN and the other folks on the MINTS project, and the folks at Preventive Medicine LLC for starting me on this road.

To my parents, Roger and Regina, for letting me take over their pool lanai to write on, and for being amazing and supportive always. To Jonathan Dirksen for transcription support and being patient with me, and to Eric and Tess for the love and support.

And to all my best women who I couldn't do without—Lisa Boyd, Kathleen Sullivan, Lori Baker, Michele McKenzie, Tesia Kosmalski, Samantha Bailey, Mags Hanley, Ashley James, and Rebecca Davis. Love to you all.

CONTENTS

	PREFACE	IX
1	TALKING TO THE ELEPHANT So Why?	1 2
	Aren't People Just Stubborn/Clueless/Lazy?	2
	How Does Learning Fit In?	3
	What Else Matters?	4
	Meet the Elephant	5
	Who Are You Talking To?	7
	Talk to the Elephant	8
	Talk to the Rider and the Elephant	11
	About the Examples in This Book	11
	Key Points	12
2	TAKING A SYSTEMS VIEW	13
	"We Need Training"	13
	Systems Thinking	16
	Tuning a System	24
	How This Impacts Behavior-Change Projects	25
	How This Impacts Learning Design	25
	Key Points	27
3	MOVING ALONG THE CHANGE PATH	29
	How the Change Process Impacts Learning Design	29
	Approach 1: Design for the Whole Process	31
	Approach 2: Meet People Where They Are	31
	Approach 3: Leave Tools Along the Way	32
	Stages of Change	32
	Change Ladder	35
	The Learning Journey	40
	Key Points	46
4	COMMUNICATING VALUE	47
	What's It Worth?	47
	Calculating Value	54
	So How Does This Impact Training?	73
	Key Points	78

5	UNDERSTANDING MOTIVATION	81
	They're Just Lazy	82
	It's Not About Motivating People	82
	Persistence of Motivation	83
	Intrinsic and Extrinsic Motivation	83
	Motivation Theory	86
	Motivation as a Continuum	91
	Strategies to Foster Motivation	104
	Talk to Your Learners	108
	Key Points	109
6	ANALYZING BEHAVIORS	111
	The Behaviour Change Wheel	111
	Specifying the Behavior	121
	COM-B	123
	Using COM-B to Analyze Behaviors	126
	Key Points	129
7	DETERMINING IF IT'S A TRAINING PROBLEM	131
	Diagnosis of the Problem: What Are the Causes, and Can Learning Help?	132
	Lack of Feedback	133
	Unclear Goals	136
	Unlearning an Existing Behavior	137
	Unawareness of Consequences/Bigger Picture	139
	Lack of Environment or Process Support	140
	Anxiety/Fear/Discomfort	142
	Lack of Confidence/Belief About Capabilities	144
	Mistrust	146
	Social Proof	147
	Lack of Autonomy/Ownership	148
	Learned Helplessness	149
	Misaligned Incentives	151
	Lack of Identity or Value Alignment	152
	Emotional Reaction	154
	Handwashing Total Up	156
	Example: Networking for College Graduates	156
	Key Point	158

CONTENTS

8	MAPPING TO SOLUTIONS Meet Miguel and Lisa	159 159
	Intervention Types	155
	Mapping COM-B to Intervention Types	161
	Behaviour Change Techniques (BCTs)	164
9	USING PERSUASION AND MOTIVATION TECHNIQUES	167
3	Meet Evan	167
	Behaviour Change Techniques	170
10	USING PLANNING, PRACTICE & FEEDBACK	181
	Meet Angelika	181
	Behaviour Change Techniques	184
	Feedback and Monitoring	195
11	USING ENVIRONMENTAL AND SOCIAL SUPPORT	201
	Meet Anh	201
	Behaviour Change Techniques	204
12	VALUES AND IDENTITY	211
	Meet Nate	211
	Behaviour Change Techniques	213
13	DESIGNING RESPONSIBLY	225
	Ethical Issues with Behavior-Change Design	226
	Key Questions to Ask	232
14	PUTTING IT ALL TOGETHER: A CASE EXAMPLE	233
	Meet Rita	234
	Understanding the Challenge	234
	Choosing the Behavior(s)	235
	Research and Analysis	242
	Where Are They Getting Stuck?	243
	Is It Training? Using COM-B	243 244
	Intervention Domains	244
	BCT Selection	243
	Learning Strategy	247
	Format Selection	243
	Implementation Planning	251
	Evaluation	252
	Wrap Up	252

15	REAL-WORLD EXAMPLES	253
	Project 1: Building Women's Entrepreneurial Skills in Rwanda	255
	Project 2: MindGym Leadership Development	262
	Project 3: Sport Integrity Australia—Anti-Doping Education for Athletes	265
	Project 4: A Digital App for BecomeAnEx.org (Part of the Truth Initiative)	271
	Project 5: Harness Hero and Behavior-Change Games	275
	Project 6: Project VALOR—Social Media Marketing to Promote Virtual HIV	
	Consultation and Referral	279
	CONCLUSION	289
	INDEX	291

PREFACE

(In which we ask, "Just who is the audience for this book, anyway?")

So, if you are viewing the preview pages for this book on a website or while you're standing in a bookstore right now, you might be asking yourself if this book is useful for you. That is a fair question.



This book is intended for people who create learning experiences. Specifically, this is for people who are designing or creating or implementing learning experiences that are intended to change behavior.

This could be for just about anything. For example, these experiences could include

- A training program on safety procedures for food service workers
- A tutorial on a financial services website about how customers can save for retirement
- A class to help middle school teachers learn ways to support positive communication traits in their students
- A study skills online course for college students
- A community education class for seniors on maintaining strength and flexibility as they age



You might be noticing that this list is mostly about learning experiences for adults, and you'd be absolutely correct about that. I've been creating learning materials for about 30 years, and pretty much all of the projects I've worked on have been for adult audiences, either in workplace settings or higher education.

Although a lot of what I will discuss in this book could also be relevant for school-age kids, that's not my area of expertise, so I won't comment on how to translate any of this material for those age groups.

WHO IS THIS BOOK NOT SO MUCH FOR?

So, maybe knowing who the book is for has left you wondering who the book is not for. The contents may be helpful for other audiences, but it's *not* really directed at

- People who are trying to change their own behavior. I'm sure that many of the strategies discussed in this book are relevant to people who are trying to make changes in their own lives, but that won't be the focus.
- People who are treating audiences with diagnosed conditions relating to mental or behavioral health. For example, this book is not intended for therapists working with clients in a mental health setting. Again, some of the strategies may be useful, but this is not my area of expertise, and most of the solutions and strategies discussed have been designed for a general audience.
- **People who are working with kids.** As already mentioned, people who are creating educational materials for school-age children may find some useful ideas but would definitely need to filter it through their own expertise with the age group they work with.

IS THIS BOOK FOR BEHAVIORAL DESIGNERS?

As I'm writing this book, the field of behavioral design is rapidly expanding in organizations. Roles like "behavioral designer" and "behavioral strategist" are popping up in many organizations and consultancies (okay, at the moment, it's mostly consultancies). While I don't have any particular insight into how the field will evolve, I think it's reasonable to suppose that training and instruction will continue to play a role in many behavior-change initiatives. This book is not intended to teach behavioral designers how to do instructional design, but it will have many options they may want to consider when part of their intervention relies on the creation of effective learning materials.

WHAT IS THIS BOOK TRYING TO DO?

Billions of dollars are spent every year on workplace training, and most of it is in service of training the participants to do something differently when they leave the training environment and go back to the workplace.

It's not clear how much of this training is effective in supporting those behavior changes, but I don't think it's controversial to say that we could do better. Over the last dozen years, there has been an abundance of new research happening in the behavioral sciences, but not much of it has made its way into learning and development or higher education.

Additionally, training and education are often part of interventions designed by behavioral scientists, and integrating instructional design with behavioral design can help make those learning experiences more effective.

In this book, I share tools and strategies to help people create learning that supports behavior change. Here's a brief overview of what you'll find in each chapter:

- **Chapter 1, "Talking to the Elephant":** I explain why the book is titled *Talk to the Elephant* and how we need to think about learning design differently when we are trying to help people with complex behavior-change challenges.
- Chapter 2, "Taking a Systems View": Often behavior-change efforts require a very narrow focus on the behavior, but too narrow a focus can cause us to miss more systemic causes. In this chapter, I share examples of how to consider both the specific behavior and the broader systems that influence that behavior.
- Chapter 3, "Moving Along the Change Path": Change is a process, not an event, and this chapter covers the stages of change and how you can support learners at different points in the change process.
- Chapter 4, "Communicating Value": Most learning and development professionals are given the advice that they need to communicate WIFFM (What's In It For Me), but often how we communicate value fails to achieve the desired outcomes. This chapter looks at how the elephant perceives value and how to craft messages to help the learners buy in to a behavior change.
- Chapter 5, "Understanding Motivation": This chapter covers some of the most useful models of motivation and how to frame learning experiences to support intrinsic motivation, autonomy, and agency.
- **Chapter 6, "Analyzing Behaviors":** I share how to frame, prioritize, and select behaviors and how to use the Behaviour Change Wheel and COM-B model to analyze a behavior.

- Chapter 7, "Determining if It's a Training Problem": Often learning and development people are presented with problems to solve that aren't really training problems. In this chapter, I go through some of the most common issues that often get handed to us as training problems and examine what we can and cannot do for each.
- Chapter 8, "Mapping to Solutions": This chapter looks at how you take the COM-B analysis of the behavior and start to map your analysis to different types of behavior-change interventions.
- Chapter 9, "Using Persuasion and Motivation Techniques": This chapter looks at examples of behavior-change techniques that are related to persuasion and motivation.
- Chapter 10, "Using Planning, Practice & Feedback": This chapter looks at examples of behavior-change techniques that are related to planning, practice, and feedback.
- Chapter 11, "Using Environmental and Social Support": This chapter looks at examples of behavior-change techniques that are related to environmental and social support.
- **Chapter 12, "Values and Identity":** This chapter looks at examples of behaviorchange techniques that are related to values, identity, and ownership.
- **Chapter 13, "Designing Responsibly":** This chapter looks at the ethical issues involved in behavioral design and at ways to ensure that you are designing as responsibly as possible.
- Chapter 14, "Putting It All Together: A Case Example": This chapter walks through an example of using all the tools I've discussed so far and applying it to a particular behavior-change challenge.
- **Chapter 15, "Real-World Examples":** To conclude the book, we hear from people who are doing behavioral learning design and examine different examples of the behavioral design process.

HOW DOES THIS MATCH UP WITH MY PREVIOUS BOOK?

First of all, if you are reading this book because you also read my book *Design for How People Learn*, then THANK YOU. I'm very happy to know that the first book was useful enough to bring you back.

This book is an expansion and elaboration on the motivation chapter and some other points in *Design for How People Learn*. It's a deeper dive on the topics, and my rough estimate is that 10 to 20 percent of the material will sound familiar to readers of the

previous book, but if that's not your experience, please let me know. All the words are new, but many of the principles have not changed between the two books, and I can't assume a reader of this book has also read the other book, so there will be some necessary repetition.

WHO AM I TO WRITE THIS BOOK?

When people ask me what I do, I usually say, "I'm an instructional designer." Most of the time (like, 99 percent), this provokes a slightly puzzled head tilt and a hesitant, "Okay...?" (Other instructional designers know what I'm describing.) My degree is in "Instructional Systems Technology," and I've worked for almost 30 years on the design of learning materials and experiences for adults. I also spent about half my time in graduate school studying human-computer interaction (or what we now more commonly call UX (User Experience) design).

I became interested in behavioral design in the early 2000s because I felt like there was a gap in my toolbox, but I've spent the last dozen or so years educating myself on the principles and models of behavioral design via books, media, research papers, practical application, and formal workshops.

Many of the books on behavioral design come from academic researchers, and it's great that so many of them are able to translate their work for more general consumption. It can be difficult, though, to take even the best written books on behavioral science and connect those to practical guidance in an applied domain. I'm not a researcher; I'm very much a practitioner who tries to translate research into practical application. I try to approach all of these topics with humility and strongly encourage you to test any recommendations or solutions with your audience in your context. Just because something worked in one context doesn't mean it will work for you, but these concepts and models do give you a place to start.

Thanks for considering this book, and best of luck.

Julie

Materials and resources to support this book can be found at usablelearning.com/elephant



TAKING A SYSTEMS VIEW

(IN WHICH THE ELEPHANT IS JUST PART OF A WHOLE ECOSYSTEM)

"WE NEED TRAINING"

When a system fails, "training" is almost always promised as part of the solution. Here are some examples:

- In 2018, Starbucks Coffee Company—in response to complaints about discriminatory actions from Starbucks employees—closed approximately 8,000 Starbucks locations for a day and had roughly 175,000 employees participate in "racial-bias education geared toward preventing discrimination in our stores."
- Police officers spend thousands of hours every year in "Use of Force" classes aimed at teaching them how to not use unnecessary or excessive force.
- Billions of dollars are spent every year on things like "leadership" training.

It's not difficult to see that for each of these, training is likely only a small fraction of what is needed to truly make significant change.

LEARNING AS PART OF A SYSTEM

There's a quote that I'm a bit obsessed with (attribution is a bit murky, but a likely originator is Paul Batalden based on ideas from W. Edwards Deming, a well-known engineer and management consultant):

Every system is perfectly designed to get the results it gets.

Whenever we are dealing with a problem, challenge, or difficulty, it's always worth asking these questions:

- What is it about the system that is causing an outcome?
- And how is the system influencing the behavior of the people in that system?

When we attribute outcomes to people's attitudes or capability (for example, "They're just lazy"), we miss the crucial point that there's usually a reason for someone's behavior, and if we don't ask what that reason could be, we are missing vital data that could help change the situation. A behavior can be "wrong" according to standard operating procedures and still be right in the sense that there is some functional reason in the environment or system for that person's behavior.

For example, a store clerk might guess the price of an item rather than holding up a large line of customers while they go through the official process of getting the price checked. Some stores recognize that a very strict adherence to a procedure like price checking can compromise bigger goals like good customer experience, so they deliberately give clerks latitude about using judgment for small-stakes items in service of that better customer experience.

IRRATIONALITY AND BIAS EXIST IN SYSTEMS

Much has been made of irrationality and bias when it comes to behavior change. There are impressive infographics that show all the cognitive biases. Several books have been written about the quirks of human irrationality. These are often interesting and entertaining, and there are important things we can learn from them, but they aren't always useful. Looking at these biases as interesting phenomena ignores the fact that they're related to the context and environment in which they occur.

Daniel Kahneman (the winner of the Nobel Prize for his contributions to behavioral economics), in his seminal text *Thinking*, *Fast and Slow*, explains a riddle that they used to test what he describes as people's "Lazy System 2":

A bat and ball cost \$1.10.

The bat costs one dollar more than the ball.

How much does the ball cost?

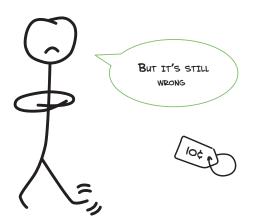
Many people answer 10 cents. The actual answer is 5 cents, with the bat costing \$1.05 (one dollar more than the ball). In his book, Kahneman describes how System 2 "allocates attention to effortful mental activities that demand it, including complex computations," but goes on to explain that "The distinctive mark of this easy puzzle is that it evokes an answer that is intuitive, appealing, and wrong." This is

Kahneman's "Lazy System 2." By not paying appropriate attention, many people get this answer wrong.

So let's look at how this question appears to the elephant:

- It's clearly historical. Baseballs and bats cost much more now, and this is presented as a puzzle. It's not a real, immediate problem with any real stakes to it, and so the signal to the elephant is *it kind of doesn't matter*.
- It's an odd format. If I wanted to know the price of an item, I would never ask it in this format, nor would I expect anyone to ever give me this piece of information for two unsimilar items (item one costs much more than item two). For example, if I was splitting a check with someone, I might compare the price of two similar items (for example, two glasses of wine), but I would never tell anybody, "My entrée cost \$28 more than your dessert." The deliberately confusing format tricks the elephant.
- It's close to a format we are used to. A much more common conversation might be "Q: How much was the ball?" "Answer: Well, it was a \$1.10, and the bat was \$1.00, so...." You've probably had versions of that conversation many times in your life. You may never have had a question in the format of the example from Kahneman's book.
- It's trivial. The difference between the right answer (the ball is 5 cents) and the intuitive answer (10 cents) is trivial for most people, so this is something where the consequences of getting it wrong just don't matter very much, so it makes sense that people would not allocate a lot of effort to figuring it out. This is also a cue to the elephant that the answer isn't particularly important.

So this example has several cues to the elephant that a quick guess will be sufficient here, and whether you consider that laziness or efficiency depends on your perspective.



There's probably no shortage of people who would point out (with some ire) to me that it's *still wrong*. And they would be correct about that, and I'm not suggesting that it doesn't matter that people get it wrong. But if we ask ourselves the reasons that they got it wrong—it's a weird format no normal person would ever use, and all the cues are telling our brains that this is a problem not worth a lot of attention, with low stakes if you get it wrong—we know a lot more about how to recognize situations where people need to heighten their attention or risk error, and how to help people avoid those errors.

SYSTEMS THINKING

So how do we take into account all the other variables that exist in the environment and consider them as we discuss a behavior? We are going to zoom in to focus on very specific behaviors in later chapters of this book because that sharp focus helps us analyze and diagnose, but a too-narrow focus can also cause us to miss other causes and solutions.

Donella Meadows, author of the classic book *Thinking in Systems: A Primer*, describes a system as "A set of things—people, cells, molecules, or whatever interconnected in such a way that they produce their own pattern of behavior over time." Trying to understand the complexity of a whole system can be overwhelming, but being able to both focus on individual behaviors and keep in mind the overall system is a necessary balancing act for any serious behavior change effort.

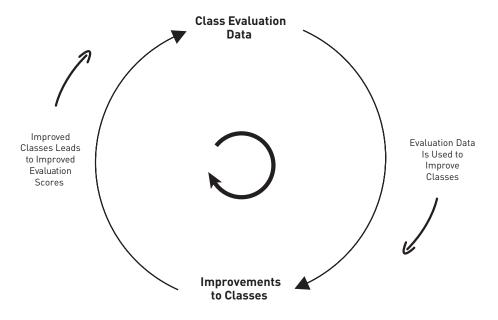
For example, we know that plastics cause many ecological issues, so you could have a narrow focus on the behavior "People need to recycle consistently and correctly." But it's worth asking if that narrow behavior will make a big enough change. Maybe people recycling more frequently and accurately will change things significantly, but we probably need to look at the bigger system and consider variables like the cost and availability of recycling facilities, the market for recycled plastics, the incentives for manufacturers to use less plastic, and so on.



One tool we can use to consider how a system works is system mapping. There's no single way to do this kind of mapping, and I'm only going to use the simplest examples here. Peter Senge's *The Fifth Discipline* and Donella Meadows's *Thinking in Systems* are both excellent books if you'd like to explore this further.

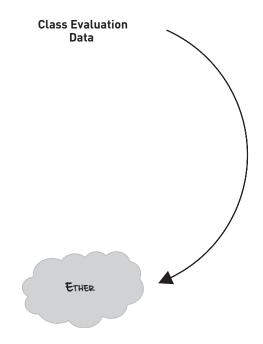
Peter Senge explains that the building blocks are reinforcing processes, balancing processes, and delays. Let's look at a reinforcing process. If you've been in the world of learning and development or higher education for any time, you are probably very familiar with the "end of class survey."

The illustration shows how this should probably work. Evaluation data should be used to improve classes, which will then improve the evaluation scores.



Eventually the system will balance out when the evaluation data and the class quality can't get any higher. Everybody wins!

That's how it theoretically *should* work. It often doesn't go quite like that. I've seen organizations where it goes something like this:



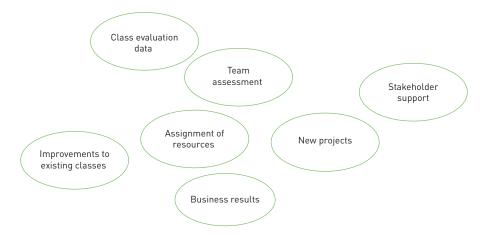
Yep, the evaluation data is collected, but then doesn't go anywhere, except into the metaphorical ether.

If a system is supposed to work a particular way, and it's not, then it's worth asking "why not?"



You can tug on each of these threads and, for example, ask why the data isn't actionable or who should be responsible for paying attention to the data.

Let's say that you are managing the training function, and you decide the team will evaluate all the evaluation data and allocate resources to improve the classes, which hopefully improves business results. That sounds pretty good! But, of course, other things are involved, like resource allocation to new projects, stakeholder support, and so forth. If you think about how these all interact, it can get complicated quickly:



If we try to figure out how these things interact, we might find that the assignment of resources to improve existing classes doesn't come with an overall increase in team resources, so they have to be pulled from somewhere. That means fewer resources for new training projects, which makes some stakeholders unhappy and leads to a decrease in business results from new projects. And the unhappy stakeholders decrease their funding support, so now you can't fill the open staff position you were counting on to support the improvements.

Thinking through these relationships can help you identify key places in the system where you can intervene and adjust to make beneficial changes.

A system view can help show where there isn't enough reinforcement, where there are unintended effects, or where difficulty seeing feedback can be causing problems.

UNINTENDED CONSEQUENCES

Any behavior change intervention can have unintended consequences. For example, the *intended* consequences for most compliance training efforts are outcomes like employees not doing things that are illegal or problematic, or legal defensibility if the company is sued.

But if we create compliance training that isn't relevant to the audience, and the message is that you just need to tick the completion box, then we may not like the

unintended consequences of forcing compliance training where it's not relevant or useful.

I talked to Christian Hunt, author of *Humanizing Rules: Bringing Behavioural Science to Ethics and Compliance*, and he described it this way:

It used to frustrate me in banking when my assistant had to do training on obscure regulations that made no sense to her whatsoever. It was not relevant to her job. And so she would sit there and go, "Oh, it's another one of those things from the people who brought you the tedious trade course." So even when it was relevant, she would sit there and go, "Here's more useless stuff from those idiots that don't understand me, I'm going to ignore it." **We are teaching people to ignore our training**.

I think the key bit with all of this is that we're dealing with human beings that are sentient. And so they will react to what they see us doing. Attempts to assess whether our training has been effective needs to bear in mind that the test itself sends a signal to employees. If you teach them something you say is important, but then if the assessment is dumb—you tell them to just regurgitate what they've just been told or give them an "everybody knows this" kind of test—that's not a genuine test of whether they know it, and they'll recognize that. And so in trying to test the effectiveness, we often actually make the situation worse and we undermine the subject matter in the tests.

WHERE DOES FEEDBACK BECOME VISIBLE?

Often, in a behavior-change project, we decide that a set of behaviors will produce the desired outcomes. At that point, it's worth asking, "Where do the consequences of a behavior becomes visible?"

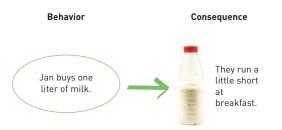
Here are some example behaviors:

- Salespeople should increase their sales of the turbowidget (desired result: increased turbowidget sales).
- Hospital healthcare providers should wash their hands according to governmental guidelines (desired result: decreased patient infections).
- Jan needs to buy extra milk while her brother and nieces are visiting (desired result: there will be enough milk for breakfast and other meals).
- Managers need to ensure that salary offers to new hires are fair and equitable (desired result: staff will be paid appropriately for their qualifications and responsibilities).

Results of behaviors can becomes visible at very different levels. I usually use the distinction of individual, group, and system levels.

INDIVIDUAL-LEVEL CONSEQUENCES

Jan's behavior will be visible at the individual level. She'll be able to see whether they have enough milk or she needs to buy more. The behavior and consequences will be pretty easy to see at the individual level:



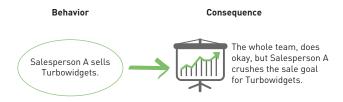
The same thing is probably true with the sales example. Most organizations track sales results at the individual level, so we can see how a particular salesperson did, as shown in the illustration.



So buying milk and selling Turbowidgets both have a visible outcome at the individual level.

GROUP-LEVEL CONSEQUENCES

Sometimes, evaluating the outcome can require comparison across a group. For example, selling 180% sounds great, but if everybody does exactly the same, then it's less impressive. But if most other people on a sales team sell around 100% of goal, then 180% is going to be exceptional.



In most healthcare facilities, the consequence of handwashing is very difficult to measure at the individual level. It would be extremely unlikely that a patient only has contact with a single healthcare provider in a hospital setting. Impact would really only be visible at a group level.



Since it's pretty much impossible to see the consequence at the individual level, the consequence has to be examined at the group level, but that might not be enough data for comparison either.

If a manager is hiring a new employee, that manager might have all sorts of reasons for the salary offer being 15% less than the person currently doing the job. The new person might have less experience or different qualifications, or the current employee might have been in the job for several years and received merit increases over the years.

A manager might be able to judge the fairness of a salary offer against several other people in the department doing the same work with similar qualifications, or they might not have anyone else in that same role.



So, sales goals, handwashing, and salary offers need comparison or aggregate data to be relevant. We need to have some basis for comparison to know if the rate of sales or patient infections are good numbers, and a single salary offer can't be judged equitable without comparing it to similar offers.

SYSTEM-LEVEL CONSEQUENCES

Sometimes consequence can be judged only at the level of whole systems. A hospital might not know whether its infection rates are excessive without being able

to benchmark against similar hospitals or national averages. Behavior changes that focus on changing the individual will be easiest when the results or consequences are visible at the individual level.

When you are being asked to design learning for a behavior change where individual learners can't see any feedback because there are no systems in place to measure at the group or system level, it's important to recognize that this will be a difficult and uphill battle, and you should make stakeholders aware that training alone will probably not be enough to support change.

For example, it can be very difficult to judge the fairness of a job offer without more data than most hiring managers have access to.

THE EXAMPLE OF PAY EQUITY

The company Salesforce.com set out to look at salary disparities. In an article in *Wired* magazine, Salesforce.com CEO Marc Benioff and two members of the senior executive team, Cindy Robbins and Leyla Seka, raised the issue of gender pay equity and proposed an audit of compensation for all employees. Benioff described how they had been working on equity initiatives for a few years at that point, so he didn't expect the audit to show much disparity.

It wasn't simple to look at the data. They "assembled a cross-functional team and developed a methodology with outside experts that analyzed the entire employee population to determine whether there were unexplained differences in pay." Benioff was chagrined to discover that there were significant disparities and that 6% of Salesforce.com employees needed their salaries adjusted, at a cost of approximately \$3 million. They found that the next year, they had to perform a similar adjustment (mostly due to acquiring companies who brought their own salary disparities to the organization). The company discovered this would be an ongoing effort and publishes an annual update on their website regarding goals and progress.

Benioff describes how this is not the product of deliberate bad actors in the system. No bad person is scheming to pay people less based on race or gender. He describes pay inequity as "a stubborn, slippery problem in business." He also explains that the reasons to fix it aren't about reputation or even doing the right thing, but that diversity and equity are good for business, according to research from McKinsey & Company and others.

The point of this example isn't to promote pay equity (though I'm a fan), but to show how a focus on individual behavior would be inadequate here. I've worked on

many diversity training projects over the years, and the training has had learning objectives like

Managers will be able to describe the importance of fair and equitable treatment.

Or even

Managers will be able to identify the characteristics of a fair and unbiased salary offer.

But in the Salesforce.com example, they were unable to see the problem clearly without a system in place to measure and correct for the issue. After the initial audit, they "devised a new set of job codes and standards and applied them to each newly integrated company." With those measures in place, it might be possible to address the problem at an individual level, as disparities against those standards would be visible on an individual basis.

TUNING A SYSTEM

Behavior change initiatives are often treated as a campaign, a class, or an event, but in the Salesforce.com example, they found that one correction was not enough. Instead, they have built up ongoing systems and publicly release their outcomes every year on their website.

We tend to view training classes as a Start > Learn > Finish process. You now know the thing you needed to learn and move on to the next thing or go out and use your knowledge.

Behavior change efforts may not always work like that. It may be an ongoing effort to reinforce and adjust. The metaphor may not be a journey, but more of a garden that needs tending as it grows or a thermostat that needs adjusting over time.

If that's too vague, we can use the example of cybersecurity. The behavior is that learners should create strong, unique passwords. There's a class that's really fun and engaging, and people come up with the hardest passwords they can imagine, and everybody leaves ready to do the right thing. That lasts for maybe six weeks or so, and then the behavior of weaker, reused passwords starts to creep back in.

I don't want to get into solutions here, but there are many kinds of behaviors that may never be a one-and-done training solution.

HOW THIS IMPACTS BEHAVIOR-CHANGE PROJECTS

If you are being asked, as a learning designer, to design a class or resources to help address individual behaviors in a system where results are not visible at an individual level, it probably won't be enough. It doesn't mean that you shouldn't try or that it can't be part of the solution, but it may be useful to have that discussion with stakeholders so the expectations are set appropriately.

- Teaching healthcare providers how to talk to patients about exercise won't help if providers aren't given the time to have those conversations.
- Teaching people the right method for handwashing will be of limited usefulness if the environment lacks clean water and adequate supplies.
- Teaching people to sort their recycling won't make a dent in plastic going to landfills if there's no market for recycled goods.

Please understand that I do not mean this in a pessimistic way! As we proceed in this book, I'm going to speak optimistically about our ability as learning designers to impact or influence behavior. I wouldn't be writing this book if I wasn't optimistic about this topic. That said, I want to be as clear as possible about the limitations of a tight behavioral focus, how solutions may often need to be part of a broader system approach, and how learning designers should also be part of those broader systems discussions.

HOW THIS IMPACTS LEARNING DESIGN

I started this chapter talking about how training often gets invoked to help solve large systemic problems. Let's take a look at a small example of making biased judgments.

You've probably heard the message that it's wrong to judge people based on their appearance. "Don't judge a book by its cover" and all that. *Sesame Street* made sure my four-year-old self knew that judging people based on how they looked was bad. And it's not difficult to look at the news and see examples where judging by appearance leads to awful consequences. Making people aware of unconscious bias is a large part of many training initiatives.

But imagine you live in an apartment building, and a delivery person contacts you over the intercom to let you know that you have to sign for a package you ordered. You walk into the lobby and see these three people:



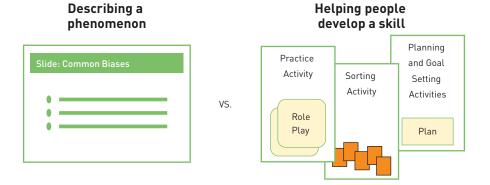
I don't think you would be guilty of any problematic bias or irrationality if you walked up to the person in the uniform holding a delivery box.

The point isn't that "judging by appearance" is okay. The point is that sometimes it's okay and sometimes it's not, and the hard part is knowing the difference.

So the learning objective isn't helping learners understand that "this bias exists." The learning objective is helping learners "recognize in which environments and circumstances I need to use extra vigilance to make sure I'm not making unfair assumptions."

The first is an interesting psychological phenomenon that you tell the rider about, and the second is a skill or habit you probably need to practice consistently to help the rider and elephant both develop.

This is an important distinction for learning design, because *the learning design will look very different*. If you are describing an interesting phenomenon, you might only need a single slide in the presentation deck, but helping people develop a skill or habit requires learning activities with practice, a feedback mechanism, and reinforcement over time.

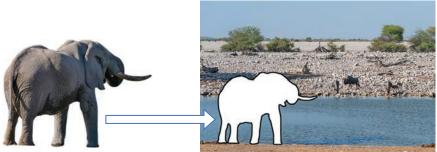


Learning where and when you need to heighten your vigilance is a product of the environment you are in, the influences that shaped your learned behavior, and the cues you have acclimated to.

The behavior, like the elephant, never exists in a vacuum. The elephant is always operating in the social and physical environment it exists in. We need to consider these things if we want to design effective learning experiences.

Elephant

Environment



KEY POINTS

- Training is often called upon to provide solutions to difficult problems, but there are often bigger system issues at play, and an intervention that only focuses on training is often not enough.
- Every system is perfectly designed to get the result it gets, so always ask, "What is causing this behavior to happen or not happen right now?"
- If a behavior is being blamed on attitude or capability, it's important to dig deeper and see if there's anything in the system or environment that is causing that behavior to happen.
- Mapping a system, and considering what forces are encouraging the change and what forces are restraining the change, can help you identify the best places to intervene in that system.
- A tight focus on individual behavior can help you design for behavior change, but you do need to periodically zoom out and consider the whole system to ensure that the individual behavior supports the outcome.
- Always ask where the feedback or consequences of the behavior will become visible. If it's visible at the individual level, it will be easier to provide feedback to individual learners. If the feedback only becomes visible at the group or system level, then there will need to be mechanisms in place to measure and assess group- or system-level impact.

RESOURCES

- Hunt, Christian. *Humanizing Rules: Bringing Behavioural Science to Ethics and Compliance* (Hoboken, NJ: Wiley, 2023).
- Kahneman, Daniel. *Thinking, Fast and Slow* (New York: Farrar, Straus and Giroux, 2011), 20 and 43.
- Langley, Monica and Marc Benioff, "How Salesforce Closed the Pay Gap Between Men and Women," Wired.com, October 15, 2019, https://www.wired.com/story/ how-salesforce-closed-pay-gap-between-men-women/.
- Meadows, Donella H. *Thinking in Systems: A Primer* (White River Junction, VT: Chelsea Green Publishing, 2008), 1.
- Parker, Kim. "When negotiating starting salaries, most U.S. women and men don't ask for higher pay," Pew Research Center website, April 5, 2023, https://www. pewresearch.org/fact-tank/2023/04/05/when-negotiating-starting-salaries-mostus-women-and-men-dont-ask-for-higher-pay/.
- Senge, Peter M. *The Fifth Discipline: The Art and Practice of the Learning Organization* (New York: Currency Doubleday, 2006).
- Starbucks Coffee Company. "Starbucks to Close All Stores Nationwide for Racial-Bias Education on May 29." Starbucks press release, April 17, 2018. On the Starbucks website. https://stories.starbucks.com/press/2018/starbucks-to-closestores-nationwide-for-racial-bias-education-may-29/, accessed May 22, 2023.

INDEX

A

acceptability (APEASE criteria), 118 accountability, 44 action planning BCT 1.4, 187 BCT 3.2, 208 affordability (APEASE criteria), 119 Allen, Michael, 11 amotivation, 92 analysis, ethical issues and, 227 analysis research, audience, 253 anticipated regret (BCT 5.2), 175 anxiety/fear/discomfort, behavior change and, 142-144 APEASE, behavior prioritizing, 118–119 rating behaviors, 119-120 dealbreakers, 120 spillover behaviors, 120 associations (BCTs), 165, 207 audience analysis research, 253 bias in, 230 eliciting from, 42 ethical issues, 227-228 effect on participants, 228 identity, 212 meeting them where they are, 31 retirement planning example, 168 support and, 202 values, 212 automaticity, 190–192

autonomy behavior change and, 148–149 motivation and, 86–87 avoidance/reducing exposure to cues for the behavior (BCT 12.3), 180

B

Bailey, Sebastian, 262-265 balancing processes, 17 barriers, perceived, 77 BCTs (Behaviour Change Techniques), 176 action planning 1.4, 187 3.2, 208 adding objects to environment (12.5), 206 anticipated regret, 175 associations, 165 avoidance/reducing exposure to cues (12.3), 180 behavioral contract (1.8), 188 behavioral experiments (4.4), 197, 208 behavioral practice/rehearsal (8.1), 192, 209 behavior substitution (8.2), 198 case example, 247 commitment (1.9), 188 comparative imagining of future out-comes (9.3), 177 comparison, 176, 178 comparison of behaviors, 165 comparison of outcomes, 165 contracts and commitment, 188 covert learning, 166, 179 credible source (BCT 9.1), 177, 209

demonstration of behavior (6.1), 176 discrepancy between current behavior and goal (1.6), 195 environment (12.1), 179, 166 environment restructure (12.1), 223 feedback and monitoring, 165 feedback on behavior (2.2), 196 focus on past success (15.3), 178 framing/reframing (13.1), 220 goal setting behavior (1.1), 179, 185, 224 goals and planning, 165, 185 graded tasks (8.2), 185 habit formation (8.3), 192 habit reversal (8.4), 198 identity, 166, 214-223 associated with changed behavior (13.1), 222 imaginary reward (16.2), 179 incompatible beliefs (13.1), 221 information about other's approval (6.3), 177 instruction on how to perform behavior (4.1), 184, 204, 214 learning experience design, 184–188 mental rehearsal of successful performance (BCT 15.2), 178 mental resources, conserving (11.3), 223 monitoring without feedback (2.1), 196 natural consequences, 165 problem solving and action planning, 187 prompts/cues (7.1), 198, 207 pros and cons (9.2), 177 reduce negative emotions (11.2), 222 regulation, 122, 166 repetition and substitution, 165 restructuring physical environment 1.6, 200 12.1, 206 restructuring social environment (12.2), 206, 210

retirement planning example, 170–172 review behavior goal(s) (1.5), 195 reward and threat, 166 reward removal (14.3), 210 scheduled consequences, 166 self-as role model (13.1), 220 self-belief, 166, 178 self-monitoring (2.3), 196 self-monitoring of outcomes (2.4), 197 shaping knowledge, 165 social comparison (6.2), 176 social support (3.2), 165, 198 practical (3.2), 208, 223 unspecified (3.1), 207 valued self-identity (13.1), 221 verbal persuasion about capability (15.1), 178 BecomeAnEx.org, 271–275 behavior change, learning and, 3 character and, 3 performance instruction, 204 performance instruction (BCT 4.1), 214 prompting, 45 systems and, 14 values, learning experiences and, 108 behavioral contract (BCT 1.8), 188 behavioral experiments (BCT 4.4), 197 behavioral practice/rehearsal (BCT 8.1), 192 behavioral solutions, characteristics, 253-254 behavioral statements, 121 behavior change anxiety/fear/discomfort and, 142-144 assets, 264 autonomy and, 148-149 confidence level and, 144-145 consequences group level, 21 handwashing example, 173-174

INDEX

individual level, 21 retirement planning example, 171–172 salience, 172–175 system level, 22 unintended, 19 emotional reaction and, 154-156 environment and, 140 ethical issues, 226 analysis, 227 design, 229-230 evaluation, 231 implementation, 230–231 interests, alignment, 227 participant protection, 228 problem definition, 226 solutions, 228-229 feedback and, 195–197 visibility, 20 identity and, 152–154 implementation intentions, 187 incentive alignment and, 151–152 learned helplessness and, 149-151 mistrust and, 146-147 monitoring and, 195-197 networking for college graduates, 156 ownership and, 148-149 problem diagnosis, 132–133 retirement planning example, 170-171 social proof and, 147-148 systems tuning and, 24-26 values and, 152-154 behavior goals, 195 behavior modeling, anxiety/fear/discomfort and, 143 behaviors automaticity, 191–192 case example brainstorming, 237-241 defining behaviors, 241 selecting, 235-237

defining, 114-115 goals and, 113-114 identifying, 115 brainstorming, 117 expert input, 116 positive deviants, 118 regular performers, 117 star performers, 117 prioritizing. See APEASE criteria stories and, 216 unlearning, 137 handwashing example, 138 practice opportunities, 138 unlearning, training and, 138–139 versus outcomes, 199 behavior substitution (BCT 8.2), 198 Behaviour Change Wheel, 111. See also COM-B Model Better (Gawande), 90 bias in pilot audience, 230 bias in systems, 14 brainstorming, identifying behaviors, 117 Building Autonomous Learners (Reeve), 104

C

call to action, 78 capabilities BCTs, 178 COM-B model, 123 case example, 246, 247 case examples, 234 BCT (Behaviour Change Technique), 247 behaviors brainstorming, 237–241 defining, 241 selecting, 235–237 blocks, 243 capability, 246–247 293

294

challenge, 234-235 coaching, 250 COM-B considerations, 244 evaluation, 252 feedback, 250 format, 251 implementation, 251-252 interventions, 245 job aids, 250 just-in-time learning, 250 learning/prelearning, 249 learning strategies, 249 mentoring, 250 motivation, 247-248 opportunity, 246-248 practice, 250 refreshing activities, 250 research and analysis, 242 resources, 250 training, 243 change ladder, 35-40 change process learning design and, 29-35 change ladder, 35-40 character, behavior and, 3 Chard, Shelly, 265-271 The Checklist Manifesto (Gawande), 44 checklists, 44 coaching, 43 case example, 250 code documentation example, 41-45 coding interviews, 272 coercion as intervention, 163 cognition, low road/high road, 7 cognitive spacing, 45 COM-B, 263 case example use, 244 identity, 213 values, 213

COM-B analysis learning experience design product options, 183 retirement planning, 169-170 support, 203 COM-B model, 111, 123 behavior analysis, 126, 128-129 capability, 123 physical, 123 psychological, 123 intervention types, 161 coercion, 163 education, 161 enablement, 164 environment restructure, 162 incentivization, 163 mapping to, 164 modeling, 162 persuasion, 162 restriction, 163 training, 162 motivation, 126 opportunity, 124-125 commitment (BCT 1.9), 188 communication feedback, nonjudgmental, 107 jargon avoidance, 106 learner input on design, 108 strengths-based language, 106 value, 48 comparative imagining of future outcomes (BCT 9.3), 177 comparison of behaviors (BCTs), 165, 176-177 comparison of outcomes (BCTs), 165, 176–177 competence, motivation and, 90 confidence level behavior change and, 144-145 training and, 145

consequences of behavior change awareness of, 139 group level, 21 handwashing example, 173-174 individual level, 21 introjected regulation, 97 retirement planning example, 171-172 salience, 172 handwashing example, 174-175 system level, 22 training and, 140 unintended, 19, 226 contracts and commitment, BCTs, 188 Cooper, Alexis, 265-271 covert learning, BCTs, 166, 179 credible source (BCT 9.1), 177, 209 critique, interview steps, 186 cues (BCT 7.1), 198 cycles of expertise, 43

D

dark patterns, 229 data collection, 261 privacy issues, 231 decision making, motivation and, 87 defining problems, 253 delayed rewards, value and, 57–62 delays, 17 demonstration of behavior (BCT 6.1), 176 developing further, 45 discrepancy between current behavior and goal (BCT 1.6), 195 DiTommaso, Dustin, 271–275 Dombrowski, Roberta, 254 Don't Mess with Texas campaign, 219 Dotson, Manya, 279–287

Ε

ease of use, value and, 77 ease, practice and, 189, 192 education as intervention, 161 effectiveness (APEASE criteria), 118 effort, value and, 49, 51 elephant metaphor, 5, 7 as audience for learning experience, 8 audience focus and, 11 motivation, 10 rider, 6 emotions behavior change and, 154–156 learning experiences and, 9 negative (BCT 11.2), 222 enablement as intervention, 164 environment (BCT 12.1), 166, 179 adding objects (BCT 12.5), 206 behavior change and, 140 physical, restructuring, 206 restructuring (BCT 12.1), 223 social, restructuring, 206 support and, 204, 206 environmental restructuring as intervention, 162 equity (APEASE criteria), 119 ethical issues, 226 analysis, 227 audience, 227-228 effect on participants, 228 data collection, 231 design dark patterns, 229 testing, 229 evaluation, 231 implementation and, 231 disclosure, 230 monitoring, 230

interests, alignment, 227 participant protection, 228 problem definition, 226 solutions, 228–229 evaluation, 17 case example, 252 measurement, 254 examples in book, 11 expertise, cycles of, 43 external regulation, motivation and, 94 mandatory learning, 96–97 professional development, 96–97 reactance, 97 wellness gift cards, 95 extrinsic motivation, 83, 85

F

feedback, 43, 195-197 as training problem, 135 BCT 2.2, 196 case example, 250 effects on training, 135 handwashing example, 133 lack of, 133 nonjudgmental, 107 practicing, 135 tools, 135 value and, 78 visibility, 20 feedback and monitoring (BCTs), 165 The Fifth Discipline (Senge), 17 Flamholtz, Eric, The Inner Game of Management, 87 focus groups, 259 focus on past success (BCT 15.3), 178 framing/reframing (BCT 13.1), 220

G

Gawande, Atul The Checklist Manifesto, 44 Better, 90 goal setting (BCT 1.1, BCT 8.2), 179, 185, 224 behaviors and, 113-114 consequences, unintended, 226 current behavior discrepancy and, 195 defined, 136 motivation and, 105-106 reviewing, 195 stakeholders and, 112 training and illustrating, 137 learning activities, 137 performance goals, 137 rubrics, 137 user research, 256 graded tasks in learning environments, 185 group level behavior change, 21

H

habit formation (BCT 8.3), 192 supporting, 193 versus routines, 193 habit labs, 265 habits learning experiences, 9 reversing (BCT 8.4), 198 Haidt, Jonathan, The Happiness Hypothesis, 5 handwashing example anxiety/fear/discomfort and, 143 autonomy and, 149 behavior change, environment and, 141 confidence level and, 145 consequences, 173-174 salience, 174-175 consequences, awareness of, 140

emotional reaction and, 155 feedback and, 133 goals, defining, 136 identity and, 153 incentives and, 151 learned helplessness and, 150 learning objective, 132 mistrust and, 146 ownership and, 149 social proof and, 148 unlearning behaviors, 138 values and, 153 highly regulated environments, motivation and, 87-89 Hunt, Christian, Humanizing Rules: Bringing Behavioural Science to Ethics and Compliance, 20

identified regulation, motivation and, 101–102 identifying behaviors brainstorming, 117 expert input, 116 positive deviants, 118 regular performers, 117 star performers, 117 identity, 211 audience, 212 BCTs (Behaviour Change Techniques), 166, 214-223 behavior change and, 152-154 changed behavior association (BCT 13.1), 222 COM-B analysis, 213 Don't Mess with Texas campaign, 219 I don't versus I can't, 218 smoker/nonsmoker, 219 stories and, 216 I don't versus I can't identity, 218

imaginary reward (BCT 16.2), 179 immediacy, value and, 56-57 delayed rewards, 57-62 immediate use, 63 implementation, 254 case example, 251-252 implementation intention behavior change and, 187 unlearning behaviors and, 138 impulses, learning experiences, 9 incentives behavior change and, 151–152 versus rewards, 199 incentivization as intervention, 163 incompatible beliefs (BCT 13.1), 221 individual level behavior change, 21 information about others' approval (BCT 6.3), 177 The Inner Game of Management (Flamholtz), 87 instruction on how to perform behavior (BCT 4.1), 184, 204 integrated regulation. See identified regulation interventions, 161 case example, 245 coercion, 163 education, 161 enablement, 164 environment restructure, 162 incentivization, 163 mapping to, 164 modeling, 162 persuasion, 162 restriction, 163 training, 162 interviews Bailey, Sebastian (MindGym), 262-265 Chard, Shelly (Sports Integrity Australia), 265-271

Cooper, Alexis (Sports Integrity Australia), 265–271 DiTommaso, Dustin (meQuilibrium), 271–275 Dotson, Manya (Jhpiego), 279–287 Kaleida, Brian (Simcoach Games), 275–279 Martin, Anna (Picture Impact), 255–262 Mitchell, Katrina (Picture Impact), 255–262 intrinsic motivation, 83–84, 102 introjected regulation, motivation and, 97–99 timesheets example, 98 training and, 100 irrationality in systems, 14

J

jargon, 106 Jhpiego, 279–287 job aids, 44, 250 justification, overjustification effect, 94 just-in-time learning, 44 case example, 250

K

Kahneman, Daniel, *Thinking, Fast and Slow*, 7 Kaleida, Brian, 275-279

L

Land O'Lakes Venture 37, 255–262 Lazy System 2, 14–15 learned helplessness, behavior change and, 149–151 learners choice, 104 input on design, 108 myths about, 82 learning active learning, 42 audience focus, 11

behavior change and, 3 change process, 29-40 eliciting from audience, 42 environments, graded tasks, 185 just-in-time learning case example, 250 prelearning, 249 using examples, 42 learning experiences audience, 7-8 BCTs, 184-188 behavior and values, 108 biases, 10 educational systems, 2 elephant rider and, 7-8 emotions, 9 following through, 1 habits, 9 impulses, 9 personal experiences, 9 visceral experiences, 9 learning strategies case example, 249 Learn Mindfully, 254 leveling up, 43 likelihood, value and, 69 personal experience and, 69-72 low-literacy learners, 260 low road/high road cognition, 7

Μ

managers, support for, training and, 136 mandatory learning, external regulation, 96–97 Martin, Anna, 255–262 Meadows, Donella, *Thinking in Systems: A Primer*, 16 measurement, 254 memory, practice and, 189–192 mental rehearsal of successful performance (BCT 15.2), 178

INDEX

mental resource conservation (BCT 11.3), 223 mentoring, 43 case example, 250 meQuilibrium, 271-275 Michie, Susan, 111 MindGym, 262-265 mistrust behavior change and, 146-147 training and, 146-147 Mitchell, Katrina, 255-262 modeling as intervention, 162 monitoring, 195-197 self-monitoring, 196–197 without feedback (BCT 2.1), 196 motivation, 81 amotivation, 92 as continuum, 91, 93 autonomy and, 86-87 case example, 247-248 categories, 103 COM-B model, 126 competence, 90 decision making, 87 external regulation mandatory learning, 96-97 professional development, 96-97 reactance, 97 rewards, 94-95 extrinsic, 83-85 feedback, 107 fostering, 104 goals, 105-106 highly regulated environments, 87-89 identified regulation, 101–102 intrinsic, 83-84, 102 introjected regulation, 97-99 timesheets example, 98 training and, 100

involving others in solution, 90 jargon and, 106 learners choice, 104 myths about, 82 persistence of, 83 relatedness and, 90 strengths-based language, 106

N

natural consequences (BCTs), 165 negative emotion reduction (BCT 11.2), 222 networking for college graduates, 156 nudges, 229

0

Oettingin, Gabriele, *Rethinking Positive Thinking*, 145 opportunity case example, 246–248 outcomes versus behaviors, 199 overjustification effect, 94 ownership, behavior change and, 148–149

P

paper usage virtual reality experiment, 65–67 participant protection, 228 performance adjustment, 43 behavior, instruction, 204 defining, 137 interview steps, 186 support, 44 persistence of motivation, 83 personal experiences, 9 value, 69–72 persuasion as intervention, 162 physical environment restructuring, 200 piloting, 254 Positive Deviance Collaboration, 118 practicability (APEASE criteria), 118 practice, 43 automaticity, 192 automaticity development, 190–191 case example, 250 cycles of expertise, 43 ease, creating, 189, 192 leveling up, 43 memory and, 189, 192 real-world missions, 43 practice opportunities, 138 practice/rehearsal (BCT 8.1), 209 prelearning, 41–42 case example, 249 presentation, training, 76 problem definition, 253 problem solving, BCTs, 187 professional development, external regulation, 96-97 prompts/cues (BCT 7.1), 198, 207 pros and cons (BCT 9.2), 177 prototyping, 254 BecomeAnEx.org, 274 VALOR Nigeria, 283 punishments, 199

R

reactance, motivation and, 97 real-world missions, 43 recognition, interview steps, 186 refreshing activities, 45 case example, 250 regret, anticipated regret (BCT 5.2), 175 regulation (BCTs), 166, 222 reinforcing processes, 17 relatedness, motivation and, 90 repetition and substitution (BCTs), 165 research and analysis audience, 253 case example, 242 resources, 44 case example, 250 restriction as intervention, 163 restructuring physical environment (BCT 12.1), 200,206 restructuring social environment (BCT 12.2), 206 Rethinking Positive Thinking (Oettingen), 145 retirement planning example audience, 168 behavior change, 170-172 COM-B analysis, 169-170 review behavior goals (BCT 1.5), 195 reward and threat (BCTs), 166 rewards external regulation, 94 wellness gift cards, 95 removing (BCT 14.3), 210 versus incentives, 199 role models, self as (BCT 13.1), 220 routines versus habits, 193

S

Salesforce pay equity example, 23 salience of consequences, 172 handwashing example, 174–175 scaffolding, 44 anxiety/fear/discomfort and, 143 scheduled consequences (BCTs), 166 self-as role model (BCT 13.1), 220 self-belief (BCTs), 166, 178 Self-Determination Theory, 106 self-monitoring of behavior (BCT 2.3), 196

INDEX

self-monitoring of outcomes (BCT 2.4), 197 Senge, Peter, The Fifth Discipline, 17 shaping knowledge (BCTs), 165 side-effects (APEASE criteria), 119 significance, value and, 54-56 Simcoach Games, 275–279 Six Sigma, visual workplace, 135 smoker/nonsmoker identity, 219 smoking cessation, tangible value and, 67, 68 social comparison (BCT 6.2), 176 social environment, restructuring (BCT 12.2), 206, 210 social proof, behavior change and, 147-148 social support, 165, 208-210 practical (BCT 3.2), 198, 208, 223 unspecified (BCT 3.1), 207 solution strategy, 254 spill-over effects (APEASE criteria), 119 Sports Integrity Australia, 265-271 stories, 258 identities and behavior, 216 strength-based language, 106 substituting behaviors, 198 support audience research and, 202 COM-B analysis, 203 environment and, 204, 206 social, 208-210 practical, 208 unspecified, 207 support systems, 201 system level consequences of behavior change, 22 system mapping, 17 systems, 13 behavior and, 14 bias in, 14 evaluation data, 17

irrationality in, 14 Lazy System 2, 14–15 tuning, 24–26 visual workplace, 135 systems thinking, 16

T

tangible value, 63-65 presentation, 76 smoking cessation, 67-68 virtual chainsaw experiment, 65-67 testimonials, 77 testing classroom materials, 259 design and, 229 Simcoach Games, 276 Thinking, Fast and Slow (Kahneman), 7 Thinking in Systems: A Primer (Meadows), 16 tools, leaving for learners, 32 training as intervention, 162 autonomy and, 149 case example, 243 confidence level and, 145 consequences, and, 140 emotional reaction and, 155 environment and, 142 feedback effects, 135 goals, illustrating, 137 goal-setting learning activities, 137 identified regulation, 102 identity and, 154 incentives and, 152 learned helplessness and, 150-151 managers, support for, 136 mistrust and, 146-147 motivation, introjected regulation, 100

301

ownership and, 149 performance, defining, 137 performance goals and, 137 practice opportunities, 138 rubrics, 137 social proof and, 148 testimonials, 77 unlearning behaviors, 138, 139 value and, 73-75 values and, 154 visual design and, 75 training issues diagnosing, 132 feedback problems, 133 feedback, 135 troubleshooting, help, 44 tuning systems, 24-26

U

unintended consequences, 226 unlearning behaviors, 137 handwashing example, 138 practice opportunities, 138 training and, 138–139 user testing, 254

V

VALOR Nigeria, 279–287 value barriers, perceived, 77 calculating, 54 call to action, 78 communicating, 48 ease of use, 77 effort and, 49–51 email example, 73–75

feedback and, 78 immediacy and, 56-57 delayed rewards, 57-62 immediate use, 63 likelihood, 69 personal experience and, 69-72 medical personnel audience, 54 significance and, 54-56 tangible, 63-65 presentation and, 76 smoking cessation, 67-68 virtual chainsaw experiment, 65-67 testimonials, 77 training and, 73-75 visual design in training, 75 WIIFM (What's In It For Me?), 52-53 valued self-identify (BCT 13.1), 221 values, 211 audience, 212 behavior change and, 152-154 learning experiences, 108 COM-B analysis, 213 verbal persuasion about capability (BCT 15.1), 178 VHIL (Virtual Human Interaction Laboratory), 172 virtual reality experiment, 65-67 virtual chainsaw experiment, 65-67 visceral experience, 9, 43 cycles of expertise, 43 leveling up, 43 real-world missions, 43 visual design, 75 tangible, 76 visual workplace, 135

W-Z

wellness programs, motivation and reward, 95 WhatsApp, VALOR Nigeria, 284 whole process approach, 31 WIIFM (What's In It For Me?), value and, 52–53