



THE EXPERIMENTAL LIBRARY

A Guide to Taking Risks, Failing Forward,
and Creating Change

Cathryn M. Copper

ALA 
Editions CHICAGO / 2024

available at alastore.ala.org

Cathryn M. Copper works at the intersection of libraries, architecture, and technology. As the head of the Eberhard Zeidler Library at the University of Toronto, her current research explores technology and experimentation in libraries. She has spoken on the topic of experimentation at several national and international conferences including the Association of College and Research Libraries and SXSW EDU. Her talk on the use of artificial intelligence and augmented reality in libraries was featured as one of the “biggest and most pressing ideas” at SXSW EDU.

© 2024 by Cathryn M. Copper

Extensive effort has gone into ensuring the reliability of the information in this book; however, the publisher makes no warranty, express or implied, with respect to the material contained herein.

ISBN: 978-0-8389-3965-9 (paper)

Library of Congress Control Number: 2023033898

Cover design by Kimberly Hudgins.

Book design and composition by Karen Sheets Design, Inc. in the Lorimer and Merlo Tx typefaces.

∞ This paper meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).
Printed in the United States of America

28 27 26 25 24

5 4 3 2 1

available at alastore.ala.org

*For my most important experiments,
Leonard and Otis.*

FOR REVIEW ONLY -
NOT FOR DISTRIBUTION

available at alastore.ala.org

CONTENTS

Introduction *ix*

Part I A Culture of Experimentation

- 1 The Power of Curiosity *3*
- 2 What Makes an Experiment? *13*
- 3 Everything Is an Experiment *25*

Part II The IDEEA Anti-Method

- 4 IDEATE *41*
- 5 DESIGN *57*
- 6 EXPERIMENT *71*
- 7 ENGAGE *85*
- 8 ASSESS *101*

Part III Mapping Experimentation to Your Organization

- 9 Fail Forward *119*
- 10 Reskilling the Information Professional *129*
- 11 The Experimentation Roadmap *143*

Bibliography *159*

Index *163*

INTRODUCTION

How do technology companies innovate so rapidly?

What infuses start-ups with the ability to take big risks? These are the questions I sought to answer when writing this book. Many of the changes libraries have responded to over the last two decades were born from technology companies and innovative start-ups. Understanding what fuels these sectors could help information professionals respond better to change. Libraries have, to a notable extent, responded to the technological and societal changes of the twenty-first century. Still, as someone who started studying the profession in the early 2000s, I have spent much of that time in response mode. Thus, I wondered if experimentation could be the tool that could move librarianship from a reactive to a proactive profession. Serendipitously, as my research unfolded, experimentation grew even more prevalent as a method used by innovative companies to test and launch new products, and I started to explore the idea of adapting this concept in libraries.

The beauty of experimentation is that anyone can do it regardless of budget. You do not need to be a computer scientist to conduct an experiment, which is fantastic because I am not one. The thread throughout my career has been working with and learning from architects and designers. As an architecture librarian, most of my experience comes from the academic realm, at institutions that vary dramatically in scale and scope. I started my career as a professional librarian at a small, private teaching institution in Southern California. Beyond offering a daily dose

of vitamin D, the region was a haven for young, aspirational twenty-somethings. Many of my peers embarked on careers with technology giants or quit steady jobs to launch the next great start-up. Around the same time, mobile technology was taking off, and I began experimenting with how architecture education could utilize this new technology. Inspired by my peers' ability to take risks, my interest in new technologies, and my work at an institution that offered flexibility and autonomy, a foundation for approaching librarianship as an experiment incubator was born.

More recently, my experience landed me at leading public research universities with a bigger budget but less autonomy. Having worked with no budget and with big budgets, with limited freedom and endless freedom, and under traditional leadership and progressive leadership, I can confidently say that experimentation is possible anywhere. Experimentation is about more than lucrative funding and fancy technology. It is about taking an iterative approach to trying new things. What I have learned from supporting the design disciplines over the years is the value of a process of opening yourself up to wild ideas, having those ideas critiqued (sometimes harshly), adapting your ideas based on feedback, and then doing it all over again until you have something ready to present to the world. As explained in *The Experience Book: For Designers, Thinkers & Makers*, "The 'designed experience' is not a product, at least not in the finished sense. It is an ever-evolving platform for collective action(s)."¹ Therefore, in the same way architects think about their designs and the built environment, which are constantly in flux based on how people perceive them and use them, experiments offer libraries opportunities to adapt too—by trying ideas, gathering input, and making informed decisions.

This book is intended for an audience beyond librarians. Any mildly risk-averse sectors can benefit from experimentation. Although many come from academia, examples of experimentation highlighted in the book are drawn from public and school libraries and non-library government sectors. There is no limit to who can implement experiments or at what level of an organization somebody can introduce them. Some chapters speak directly to the role of leadership and management in creating cultures of experimentation. In contrast, other chapters encourage a

grassroots approach to experimentation, to emphasize that there is no single “right way” to experiment.

This book is organized into three iterative parts, each of which offers insight into an aspect of experimentation. Although not everything in each part must be implemented to create an organization that experiments, elements from each of the three parts are required in an organization that genuinely experiments. Trying, tweaking, and trying again the ideas presented in this book will help you decide what aspects of experimentation work best for you.

The book’s first part focuses on creating cultures of experimentation, a core aspect of organizations that take risks and innovate. Looking at experimentation through the lens of technology companies and start-ups, it dives into the characteristics of these two sectors and disentangles the techniques that make them experimentative. Chapter 1 explains the importance of incorporating curiosity into work and daily life and speaks to how technology companies and start-ups encourage curiosity. Chapters 2 and 3 then examine what an experiment is, why it is necessary, and how it can become a part of everything you do.

Building on these ideas, the book’s second part presents a method to take what we have learned from technology companies and start-ups and implement it in libraries. The process known as IDEEA—ideate, design, experiment, engage, assess—walks through five areas that you can develop when starting to experiment. (I actually consider IDEEA to be an anti-method because no “method” for experimentation could theoretically exist.) Chapter 4 discusses design thinking, which plays a leading role in the brainstorming or ideation phase. Once you identify a testable idea, prototyping allows for some experimentation with a minimal upfront commitment. The prototyping phase may have many or only a few iterations, but ultimately one (or all) of them will help solve the problem you are seeking to answer. Chapters 5 and 6 focus on the concept of prototyping by breaking it down into designing and experimenting. An experiment is only complete once you engage users in testing and identify the pros and cons of a prototype. Then you can decide how and when to move forward based on this data. Chapters 7 and 8, respectively, discuss these last steps—engagement and assessment.

The book's final part is about bringing the culture and method of experimentation to your organization. Chapter 9 speaks directly to the importance of failure because no culture that encourages experimentation can exist without failure. The nature of experiments means there will be many failures, so the book presents thoughts on embracing and learning from them. Chapter 10 highlights the skills needed to experiment. Because information professionals already possess most of these, the focus of the chapter is on how to leverage those skills and create teams that thrive on experimentation. Finally, chapter 11 presents a roadmap to bring experimentation to your organization. It offers multiple paths to build a library that embraces risks and tries new things.

At the time I was writing this introduction, generative artificial intelligence became a buzz phrase in libraries. Everybody is eager to figure out what role libraries will play in using, developing, and teaching this new technology. I wonder whether this is also an experiment. I read an article in *TechCrunch* that described the brilliance of OpenAI's ChatGPT, an artificial intelligence (AI) text-generating tool, like this:

The short explanation is that tech moves fast and big companies move slow, and while Google released paper after paper and tried to figure out how to fit AI into its existing business strategies, OpenAI has focused on making the best models and let people figure out their own applications.²

In this case, the laissez-faire approach of the underdog won. Instead of aiming for a finished product, which was the approach of some of the tech giants, OpenAI's style was to create a prototype, launch it, and see how it developed—a true experiment. Like OpenAI, we too are living in the age of experimentation and trying to figure it out as we go along. If you are willing to take the risk, you will likely reap the reward.

This book is not a how-to book but rather a toolbox of ideas that you can choose to implement. The tools in this book will help shift your approach to projects to one that is flexible and adaptable and will increase your appetite for risk-taking and experimentation. By doing experiments, you can acquire the skills needed for experimentation and innovation, so take what works for you and jump in.

Notes

1. Adam Scott and Dave Waddell, *The Experience Book: For Designers, Thinkers & Makers* (London: Black Dog Press, 2022).
2. Devin Coldewey, "Google Takes on ChatGPT with Bard and Shows Off AI in Search," *TechCrunch*, February 6, 2023, <https://techcrunch.com/2023/02/06/google-takes-on-chatgpt-with-bard-and-shows-off-ai-in-search>.

FOR REVIEW ONLY -
NOT FOR DISTRIBUTION

INDEX

#

- 2SLGBTQ+ resources, 83
- 3D scanning, 86–89, 97
- 3Doodler, 96, 108, 109, 110–111*f*
- 99 AI Challenge, 79–80

A

- A/B testing, 16–17
- administrators, 23, 126–127, 130, 136–140,
145–146, 149
- AIGA, 73
- Alford, Larry, 76–78
- Amazon, experimentation by, 19, 123–124
- ambassadors, 134, 145–146
- Anderson, Laura, 76–81
- Apple, as innovation leader, 3–4, 7, 38,
43, 157
- approval process, 145–146, 147*f*
- artificial intelligence (AI), xii, 53, 79–80
- assessment phase of IDEEA, 63, 101–116,
134
- augmented reality (AR), 58, 61, 154

B

- baby boomers, as team members, 132
- Ball, Melissa C., 90–91
- behaviors, in lifecycle mapping, 46–47
- beta spaces, 73–74. *See also* space-based
experiments
- Bezos, Jeff, 19, 124

- bias, 17, 60, 105, 125–126
- Booking.com, 127–128, 146, 148, 152
- brainstorming, 41–42, 43–44, 51–53, 130–131
- branch libraries, 64–65, 115
- branding and rebranding, 97–99
- budgets, limited, 137, 150–151

C

- Carnegie Mellon University (CMU),
28–29
- cataloging bias, 125–126
- centralized teams, 155
- ChatGPT, xii
- Chattanooga Public Library, 73
- close-ended questions, 104
- collaborator-based teams, 141
- committees, 66–67, 148–150, 155. *See also*
teams
- communication plans, 144, 145*f*, 152–153
- companies. *See* technology companies
- concept maps, 44–45*f*
- conferences
 - attending, 5–6, 43, 97, 131, 137
 - presenting at, 97
- control groups, 18, 62–63
- coordinators, 148–150, 155
- COVID-19, 81–84
- creativity
 - vs.* innovation, 5–6
 - uncertainty and, 22, 129–130
- curiosity, power of, 3–11, 130

D

data assessment, 63, 101–116, 134
 data collection
 bias in, 17, 60, 105
 considerations for, 59–64, 101–102, 122
 examples of, 35–36
 librarians' expertise in, 8, 9, 134
 tools for, 102–108
 dataCoLAB, 29
 decentralized teams, 155
 decision-making, 4, 15, 17, 20, 23
 design phase of IDEEA, 57–69, 122
 design thinking, 42–44, 48–56, 156–157
Design Thinking for Libraries Toolkit
 (IDEO), 48–49, 56
 designed experience, x
 digitization experiments, 27–28, 154–155
 displays, 72
 diversity, equity, and inclusion, 44–45,
 78–79, 93, 125–126, 149
 documentation, post-experiment, 94–97
 Dropbox, success of, 7–8

E

Eames, Charles and Ray, 126, 128
 Einstein, Albert, 43
 Electric Campfire experiment, 75, 76f
 Ellender Library, 89, 90
 empathy, as foundation of design
 thinking, 49, 51
 employees
 generational differences in, 131–132
 job descriptions of, 134–136
 rewards and incentives for, 145f,
 150–151
 See also librarians; teams
 engage phase of IDEEA, 85–99
 equity, diversity, and inclusion, 44–45,
 78–79, 93, 125–126, 149
 evaluation methods, 109–116
The Experience Book (Scott and Waddell), x
An Experiment in Modern Knowledge
 Spaces (Stuart et al.), 30
 experiment phase of IDEEA, 71–84

experimentation

administration and, 23, 126–127, 130,
 136–140, 145–146, 149
 assessment phase of, 63, 101–116, 134
 barriers to, 4, 22–23, 94, 136, 138–139,
 155–157
 building a culture of, 4–5, 7–11, 13–14,
 18–24, 25–38, 145f
 curiosity and, 3–11, 130
 design phase of, 57–69, 122
 engage phase of, 85–99
 experiment phase of, 71–84
 ideation phase of, 41–56, 64, 72, 93
 roadmap for, 143–158
 role of play and discovery in, 10, 78,
 98, 153
 small changes as, 14, 23–24, 32–34, 36
 by technology companies (*see*
 technology companies)
 tools for incentivizing, 145f, 150–151
See also innovation
 experiments
 case studies of, 28–34, 65–68, 73–83, 90–93
 choice of, 56
 creating excitement about, 99
 every aspect of libraries as, 25–26, 35–38
 field or real-world, 17
 intentional *vs.* incidental, 35–36
 natural *vs.* lab, 16–17
 as needing to solve a problem, 42–45
 pop-up, 73–74, 94
 program-based, 28–29, 78–80
 vs. prototypes, 14
 scientific, 18
 space-based, 17, 29–32, 35–36, 61, 64,
 73–75, 82–83, 104
 successful *vs.* unsuccessful, 113–116,
 119–128, 148, 153
 technology-based, 27–28, 32–34, 79–80,
 106–107

F

Facebook, 90
Failing Forward (Maxwell), 120

failure
 embracing and learning from, 67–68,
 119–128, 130, 146, 153
 evaluating for, 113–116
vs. mistakes, 128
 of start-ups, 124–125
 Florida International University, 90–93
 focus groups, 46, 50, 105–106, 108, 110–112
 fyp, on TikTok, 89

G

Gen X team members, 132
 Gen Z
 as team members, 131
 TikTok as search engine for, 88
 generative AI, xii, 53
 renification, 82, 84n10
 Georgia Tech Library, 29–32
 “Getting Started with TikTok for
 Library Marketing” (Stephens),
 89–90
 goals, tangible, 140. *See also* objectives
 Google
 focus on play and fun at, 10
 free innovation time at, 135
 number of experiments conducted
 by, 16
vs. OpenAI, xii
 Google Forms, 103, 104
 Gothelf, Jeff, 33
 government sector, 65–68
 Graduate School of Design (Harvard), 74
 Green Library at FIU, 90–93
 green light, getting the, 145–146, 147f
 growth mindset, need for, 5–6, 23

H

Hammill, Sarah J., 90–91
Harvard Business Review, 146
 Harvard University, 17, 74–75
 hashtags, 89, 108, 124
 Heatherwick, Thomas, 21
 hiring practices, 136

Houston, Drew, 7–8
 “how might we?” asking, 43–44, 53–54
 human-centered approach, 41, 45–50, 95,
 156–157
 hypotheses, 58–60, 69

I

IBM, on middle managers, 138
 idea banks, 154
 ideation phase, 41–56, 64, 72, 93
 IDEEA process
 as anti-method, xi, 41–42
 assessment phase, 63, 101–116, 134
 design phase, 57–69, 122
 engage phase, 85–99
 experiment phase, 71–84
 ideation phase, 41–56, 64, 72, 93
 IDEO, 48–49, 131
 Implicit Association Test (IAT), 17
 implicit bias, 17
 incentives and rewards, 145f, 150–151
 incidental experiments, 35–36
 inclusion, equity, and diversity, 44–45,
 78–79, 93, 125–126, 149
 Indigo Adopt a School, 83
 information professionals. *See* librarians
 innovation
vs. creativity, 5–6
 experimentation as precursor to, 9,
 19, 23, 38
 experiments as tool to fuel, 9
 as a good idea executed well, 13,
 42–43
 insight as foundation of, 49–50
 by technology companies and
 start-ups, 3–11
See also experimentation
 Innovation Awards at UTL, 75–81
 insight, as foundation of design thinking,
 49–50
 Instagram, 88–89, 90, 108, 109, 112
 intentional experiments, 35–36
 interviews and focus groups, 46, 50,
 105–106, 108, 110–112

intuition bias, 17, 139
 iPad experiments, 96, 115, 120–121
 iPhones, development of, 3–4, 7, 38, 43, 157

J

job descriptions, 134–136

K

key performance indicators (KPIs), 112

L

lab experiments *vs.* natural experiments,
 16–17

Library, 73–74

leadership, skills for, 132–134, 137–141

Lean UX (Gothelf), 33

librarians

- curiosity in, 5–6, 9, 130
- data collection expertise of, 8, 9, 134
- repetitive work of, 22–23
- skills needed by, 129–141
- with user-experience expertise, 134
- See also* employees

librarianship

- need for a growth mindset in, 5–6, 23
- as slower moving discipline, 4, 5

libraries

- barriers to experimentation in, 4,
 22–23, 94, 136, 138–139, 155–157
- branch and satellite, 64–65, 115
- branding and rebranding of, 97–99
- building a culture of experimentation
 in, 4–5, 7–11, 13–14, 18–24, 25–38
- case studies of, 28–34, 73–83, 90–93
- displays as attractions in, 72
- as every aspect being an experiment,
 25–26, 35–38
- on Instagram, 88–89
- satisfying experiences at, 21
- in schools during the pandemic, 81–83
- spaces and layouts in, 17, 29–32, 35–36,
 61, 64, 73–75, 82–83, 104
- vs.* technology companies, 8, 19–21,
 25–26, 143

Library East Commons (LEC) at Georgia
 Tech, 29–32

Library Journal, 97

Library of Congress classification system,
 125–126

Library Test Kitchen, 74–75

lifecycle mapping, 46–47*f*

Lin, Geraldine, 97–98

LinkedIn Learning, 110, 131

Lists of Opportunities (Morley), 81

Looking Glass, 91, 96, 121, 122

Los Angeles (LA) County Library, 97–98

Luca, Michael, 35

M

“Making Room for Innovation”

(Goldenson and Hill), 73–74

managers and administrators, 23, 126–127,
 130, 136–140, 145–146, 149

maps

- concept maps, 44–45*f*
- lifecycle maps, 46–47*f*

marketing, 88–93, 97–99

Massachusetts Institute of Technology
 Libraries, 136

Mathews, Brian, 28–29, 31*f*, 32, 138

Maxwell, John C., 120

*The Measurement and Evaluation
 of Library Services* (Lancaster et
 al.), 101

Media Memory experiment, 75

“Meet, Greet, and Eat’ Outreach” (Ball et
 al.), 90–91

mentoring programs, 134

Microsoft, failure at, 123

middle managers, 23, 138

millennial team members, 131–132

mistakes *vs.* failures, 128

models, as prototypes, 14–15

mood boards, 55

Morley, Bonnie, 81–83

N

natural experiments *vs.* lab experiments,
 16–17

The New York Times, 88
news article exercise, 54–55f

O

objectives, 59, 62–64, 66, 112–113, 115, 122, 128, 148
observation
 as data collection tool, 104–105, 110, 111f
 as foundation of design thinking, 49, 50–51
 grid for, 110, 111f
open houses and playdays, 90–93
Open Science & Data Collaborations (OSDC), 28–29
OpenAI, xii
open-ended questions, 53–54, 110–112
outreach and engagement, 85–99

P

pandemic, momentum from, 81–84
partnerships, 93–94
patrons. *See* users
PGH Lab, 65–68
pilot testing. *See* prototyping and testing
pink zones, 145f, 154
Pittsburgh's PGH Lab initiative, 65–68
play and discovery, fostering, 10, 78, 98, 153
playdays and open houses, 90–93
Polak, Elliot, 32–33, 34
pop-up experiments, 73–74, 94
The Power of Experiments (Luca and Bazerman), 35
problems, identifying, 42–45, 52
program-based experiments, 28–29, 78–80
project-based teams, 141
prototyping and testing, 4, 13–24, 38, 57–58, 61–62, 69, 103f, 151

Q

QR code example, 58, 61
qualitative *vs.* quantitative research, 105–112

questionnaires and surveys, 46, 102–104, 108, 110

questions

close-ended, 104
“how might we?,” 43–44, 53–54
open-ended, 53–54, 110–112
“why not?,” 10

R

Rausch, Daniel, 124
rebranding, 97–99
recipes, at Library Test Kitchen, 75
research and design (R&D), investment in, 19–21
research bias, 17, 60, 105
research questions. *See* hypotheses
rewards and incentives, 145f, 150–151
The Rise of AI (Hervieux and Wheatley), 79
Rovio, 125

S

scanning, 3D, 86–89, 97
school libraries, 81–83
scientific experiments, 18
Sense Scanners, 86–87, 91
service sector *vs.* technology sector, 19–21
Sinek, Simon, 43
skills, essential, 129–141
Skip the Scan, 82, 83
social media, 88–90, 107–108, 112, 123–124
Sorondo, Barbara M., 90–91
South by Southwest (SXSW), 10, 97
space-based experiments, 17, 29–32, 35–36, 61, 64, 73–75, 82–83, 104
Spark, failure of, 123–124
“Start with an Hour a Week” (Nuccilli et al.), 33
“Start with Why” (Sinek), 43
start-ups
 Dropbox as successful example of, 7–8
 as epitome of experimentation, 7–8, 25
 failure rate of, 124–125
 focus on play and fun at, 10
 at PGH Lab, 65–68
 See also technology companies

status quo
 bias towards, 17
 challenges to, 72, 84, 138, 139, 156
 as control group, 18, 62–63

Stephens, Rob, 89–90

Stoll, Trevor, 65–68

storytelling, 95, 108

subject headings, bias in, 125–126

submission process, 77, 144, 145*f*, 146, 147*f*, 148

success
 evaluating experiments for, 113–116
 failure as a tool for, 120–121, 126
 of organizational teams, 140–141
 skills needed for, 130–132

surveys, 102–104, 108, 110

T

Tableau, 110

taglines, 98

teams
 being a leader of, 133–134, 138–139
 brainstorming by, 43–44
 diversification of, 136
 organization of, 141, 144–145*f*, 153–155
 skills of members in, 131–132
 tips for success with, 140–141
See also committees; employees

TechCrunch, xii

technology companies
 as constant experimenters, 4, 16, 19–20
 curiosity and creativity in, 3–11
 failures by, 123–125, 127–128
 focus on play and fun at, 10
vs. libraries, 8, 19–21, 25–26, 143
 as start-ups (*see* start-ups)
 testing and prototyping by, xii, 3, 15–16, 19–21, 38
See also specific companies

technology sector *vs.* service sector, 19–21

technology-based experiments, 27–28, 32–34, 79–80, 106–107

testing and prototyping, 3–4, 13–24, 38, 57–58, 61–62, 69, 103*f*, 151

Think Like a Startup (Mathews), 138

Tinkertoys (Michalko), 56

TikTok, 88, 89–90

U

uncertainty, 7, 22, 129–130, 139

University Chief Librarian's Innovation Awards, 75–81

University of Toronto Libraries (UTL), 75–81

University of Toronto UX concentration, 134

usability tests, 33, 106–107, 112

user experience (UX), 33, 57, 102–107, 109, 112, 113, 134

user-centered hypotheses, 58–59

users
 empathy for, 49, 51
 engaging with, 85–91
 feedback from, 45–46, 102–106, 108, 110–112
 hypotheses focused on, 58–59
 lifecycle mapping the behaviors of, 46–47
 observation of, 49, 50–51
 sharing results with, 94–97

V

values, shared, 145*f*, 152–153

variables, in experiment types, 16, 18

Vercelletto, Christina, 97–98

“Visionary Pillars” model, 34

W

Wayne State University (WSU) Libraries, 32–34, 36, 60, 64

web analytics, 106–107, 112

web design experiments, 32–34, 64

“Welcoming the Curious” (Vercelletto), 97–98

“why not?,” asking, 10