

# Mastering the Art of Impactful Presentations

A Skills-Focused Webinar

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# Today's Agenda

## **From Information to Strategy – 20 minutes**

Building a logical flow that keeps your audience engaged from start to finish.

## **The Power of Narrative – 10 minutes**

Using storytelling frameworks to make your research findings compelling and memorable.

## **Flow and Engagement – 20 minutes**

Techniques to connect with your audience and maintain energy throughout your presentation.

## **Break – 10 minutes**

## **Design Principles That Work – 20 minutes**

Design principles for creating visually engaging slides that support your message.

## **Designing Information Experiences – 20 minutes**

Using charts, graphs, and visuals to tell compelling stories with your research findings.

## **When Things Go Wrong – 10 minutes**

Preparing for and recovering from technical failures during presentations.

## **Start Small, Build Momentum – 5 minutes**

Action items and resources to continue improving your presentation skills.

# Check-In (1 of 3) : How are you feeling today?

No judgement here. Drop your number in the chat.

1

**Barely Alive**

"I'm here, I'm breathing, the laundry pile has achieved sentience, I had candy for breakfast, and my coffee is cold."

2

**Brain Full**

"My brain is like 47 browser tabs open, 3 frozen, and one playing music I can't find."

3

**Caffeinated Chaos**

"Running on coffee and determination. I'm not 100% sure why I'm in this meeting, but I'll make it work anyways."

4

**Functional Human**

"I know what day it is, I've managed to feel useful today, and I only have 12 things on my to-do list."






5

**Ready to Conquer**

"I'm caffeinated, organized, AND I actually read the meeting agenda beforehand!"

# Check-In (2 of 3) : How soon do you need to give your next presentation?

If possible, turn your camera on for a quick visual check-in.

- |   |  |
|---|--|
|  Both hands up | This week – no panic here...           |
|  One hand up   | Next few weeks - feeling pressure      |
|  Thumbs up     | Next month or two - good timing        |
|  Peace sign    | Someday - here for general improvement |
|  Shrug        | No specific timeline - just curious    |

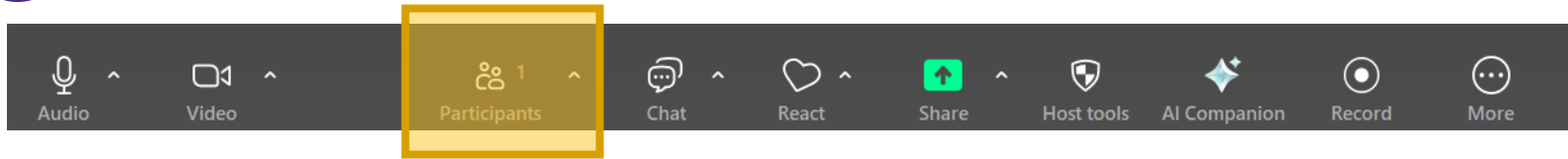
# Check-In (3 of 3): What is your biggest presentation challenge?

Use Zoom's raise hand feature (it's in the Reactions menu at the bottom). If you can't find that button, just wave at your camera when I read the response that fits you best.

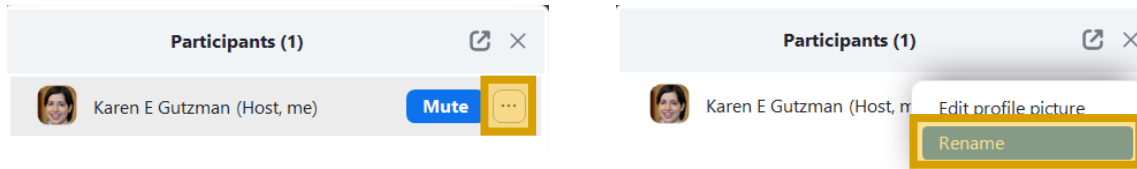
- A) Knowing what content to include
- B) Making slides that are visually appealing
- C) Actually delivering without being too nervous
- D) Keeping people engaged
- E) None of these above (type in chat your response!)
- F) All of the above - help!

# Rename Yourself in Zoom

1. Click on **“Participants”** (or “More” → “Participants” on mobile).

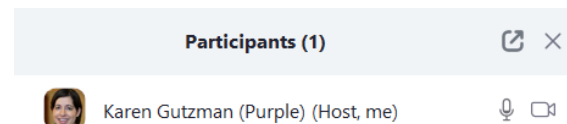
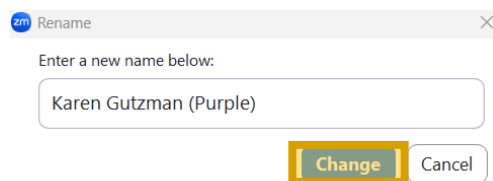


2. Hover over your name and click **“...”** → **“Rename”** (On mobile: Tap your name, then tap “Rename.”)



3. Add your **first name and the color** for your group. Click on **“Change”**

● Example: **Sam (Green)** or **Green - Sam**



Your group color is based on your **first name**:

- **A, B,C,D,E** → ● **Blue**
- **F,G,H,I,J** → ● **Green**
- **K,L,M,N,O** → ● **Purple**
- **P,Q,R,S,T** → ● **Yellow**
- **U,V,W,X,Y,Z** → ● **Red**

“

The secret to getting ahead  
is getting started."

Mark Twain

*Writer and Humorist*

”

# From Information to Strategy

Audience Needs Drives Everything

# Types of Presentations you may be asked to give...



## Instructional Sessions

10 to 60 minutes

### Structure

- Hook with real research problem
- Hands-on practice (60% of time)
- 3 key takeaways maximum
- Check understanding frequently
- End with next steps/resources



## Tool Demos

10 to 60 minutes

### Structure

- Common problems & solutions (i.e. scenarios)
- Live demo to build skills
- Link to help documentation and contact info



## Conference Presentations

15-20 minutes

### Structure

- Hook with a relatable scenario or surprising statistic
- Brief methodology
- Focus on your main finding
- Discussion with implications for practice, limitations
- End with call to action



## Professional Development

60-80 minutes

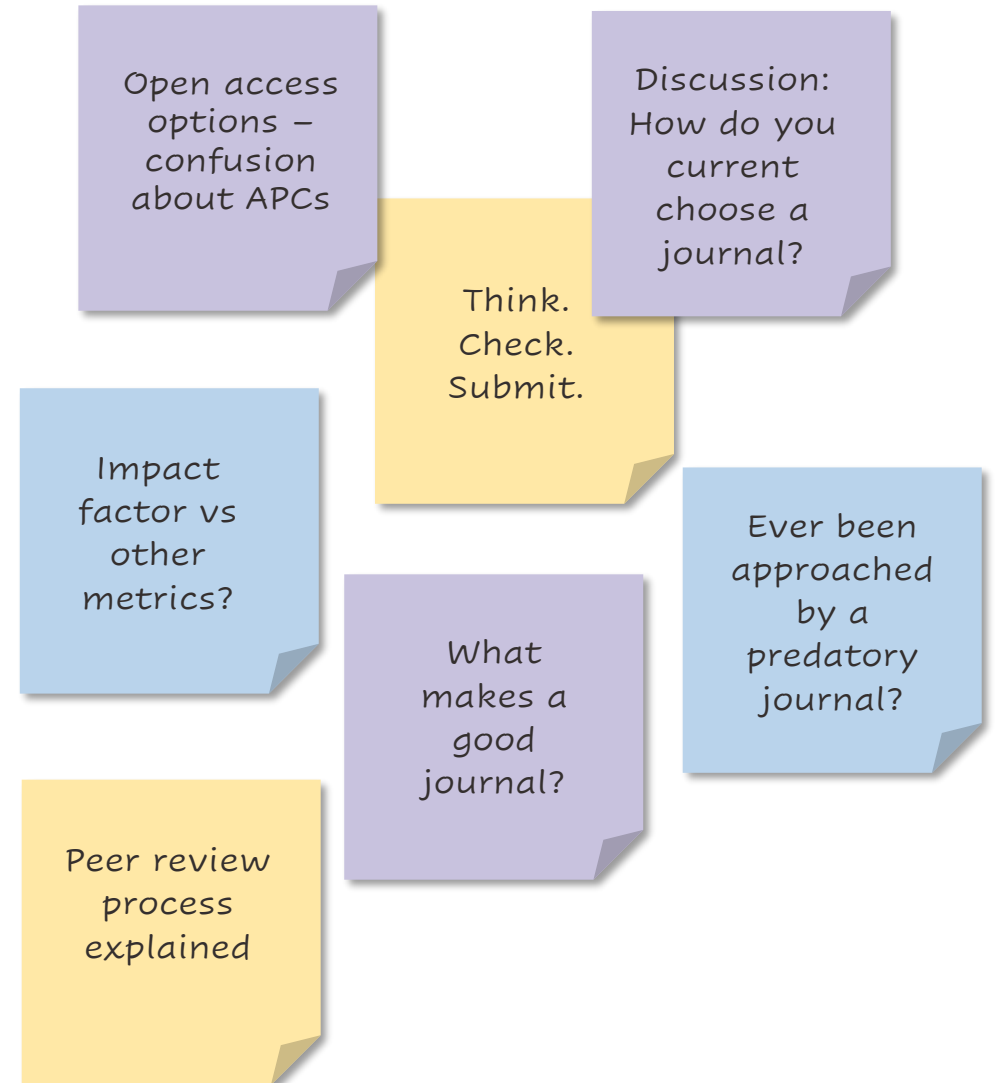
### Structure

- Strong objectives
- Interactive activities throughout
- Case studies and scenarios to connect with learners

# Start with the Mess

Capture everything without judgment or organization. This is your creative phase where all ideas are valid and welcome.

- What content, concepts, and skills come to mind?
- What examples, case studies, or stories could work?
- What hands-on activities or exercises might engage learners?
- What questions do learners typically ask?
- What mistakes or misconceptions do you see repeatedly?
- What resources, tools, or databases should they know about?



# Consider your Audience's Needs

Organize your brain dump into meaningful clusters, then prioritize based on learner needs and session constraints.

- What do learners already know coming into this session?
- What will they absolutely need to accomplish their goals?
- What's foundational vs. what's enhancement?
- What can they learn independently after the session?
- What requires guided practice or demonstration?
- What fits realistically in the time we have?

## Must Know

Importance of Author Guidelines

Think. Check. Submit.

Journal scope matching exercise

Journal Selection Tools

Journal Impact Factor

## Should Know

Open Access Options

Peer-review process explained

Low quality or predatory publishing

## Nice to Know

Editorial Board Quality Checks

## Cut from this session

Review a low-quality journal

# Matching Content to Audience

A subject librarian was invited to present on scholarly publishing to 'NIH T32 students.' Perfect - she'd given this exact presentation to another T32 group just a few months earlier and it had gone well. She wasn't well versed in NIH funding mechanisms, but she figured T32 was T32, so she packed up her slides and headed over.

What she didn't realize was that her previous audience had been post-doctoral fellows - seasoned researchers with publications under their belts. This group? First-year PhD students who'd barely started their programs.

As she waited for everyone to arrive, she chatted with a few people already there: 'So, how many of you are currently working on manuscript submissions? Who's dealing with reviewer comments right now?' She looked out expectantly at engaged faces.

Instead, she got blank stares. Uncomfortable silence.



# Matching Content to Audience

Finally, one student spoke up: 'Um... we're first-year doctoral students. We don't even have data to publish yet. Most of us are still taking coursework.'

First-years! Her heart sank as she mentally flipped through her presentation: advanced topics on impact factor selection, strategies for handling difficult peer reviewers, navigating journal revision cycles. She only had 45 minutes and a presentation full of advanced publishing strategies for an audience that needed 'Publishing 101'.

The students were looking at her expectantly. The faculty host was checking his phone. She had to make a choice: forge ahead with inappropriate content or completely improvise.

A classic case of solving the right problem for the wrong audience - her content was excellent, just pitched to people who wouldn't need it for several years.



# Matching Content to Audience

## What happened?

She prepared the perfect session .... for the wrong audience

### ● **Blue Group, type your responses into chat:**

Think about a time when you were either the speaker or audience member and the presentation didn't match the audience's needs. As a presenter, what's something you can do before your session to avoid this mismatch? And what's your backup plan if you discover the mismatch right before or mid-presentation?

### ● **Green Group, you may be called on to:**

Summarize one or more of the responses made by members of the Blue Group



# Matching Content to Audience

She prepared the perfect session .... for the wrong audience

---

## 1 Connect with the organizer

- Are these medical students, pre-docs, post-docs, staff, or faculty?
- What specific needs, assignments, or deadlines brings them here?
- What subject areas/disciplines are represented?
- How many people are we expecting?

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## 2 Survey your audience ahead (even 2-3 questions via email):

- What's your biggest challenge with [topic]?
- How familiar are you with [tool/concept]?

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## 3 Quick Pulse Checks During

- **Show of hands:** Who's gotten predatory journal invitations in their email?
- **Fist to five:** How confident do you feel about evaluating journal quality right now? Scale: 5 = I could teach this to someone to 1 = This is all pretty new to me.
- **Chatterfall:** What would make this session a win for you today?
- **Type in the chat:** What's your biggest journal selection challenge right now?
  - a) Finding journals in my field
  - b) Evaluating journal quality
  - c) Understanding metrics and rankings
  - d) Avoiding predatory journals
  - e) All of the above
  - f) Other: [type answer!]

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## 4 Prepare extra content

- Prepare backup content for when your audience knows more or less than expected

**Basic:** *What factors should you consider when choosing a journal?*

**Intermediate:** *What is your process for researching a journal before submitting?*

**Advanced:** *How do you balance journal prestige with publication speed when you have competing career pressures?*

# Matching Content to Audience

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***Advanced:** How do you balance journal prestige with publication speed when you have competing career pressures?*

## 5 Create "choose your own adventure"

- We can go deep on advanced features OR focus on getting started - what serves you better?

# Many ways to support audience needs



**Share materials early**  
agendas, slides, key concepts  
for advance review



**Provide Choice**  
You can respond in chat, raise  
hand, or just listen



**Low pressure Engagement**  
optional participation, not  
mandatory spotlight moments  
*Tip: If you do need to call on  
someone, remember to repeat the  
question and offering a few example  
responses to avoid putting anyone  
too much “on the spot.”*



**Multiple follow-up formats**  
email summary, recorded  
session, resource links

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## Use Peer Teaching concepts:

- Invite audience members to share their knowledge and experience with the group, creating a collaborative learning environment.

## Examples:

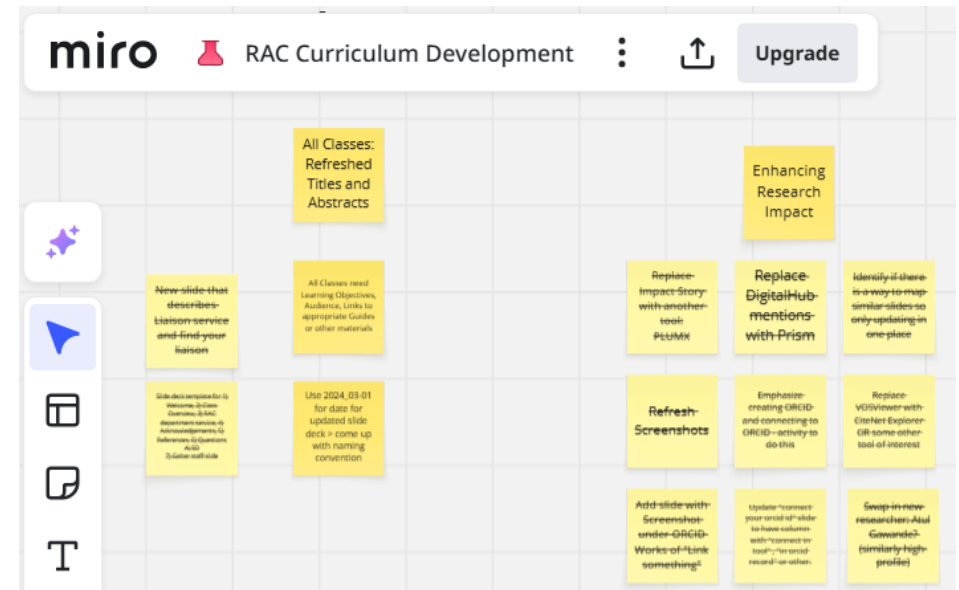
- "Sarah, you mentioned you've used this database before—what tips would you give someone just starting out?"
- "Before I show you my approach, who has tried solving this problem before? What worked or didn't work for you?"

# Resources and Tools

- **MLA's Guide to Health Sciences Instructional Design** <https://www.mlanet.org/courses/the-mla-guide-to-instructional-design-basics/>
- **Learner-Centered Pedagogy: Principles and Practice** (by Kevin Michael Klipfel and Dani Brecher Cook) <https://alastore.ala.org/content/learner-centered-pedagogy-principles-and-practice>

## Virtual White Boards

- **Miro** - Comprehensive collaboration platform with extensive template library
- **Microsoft Whiteboard** - Simple, integrated option for Office 365 users





Stories are data with a soul.

**Brené Brown**

*Researcher and Storyteller*

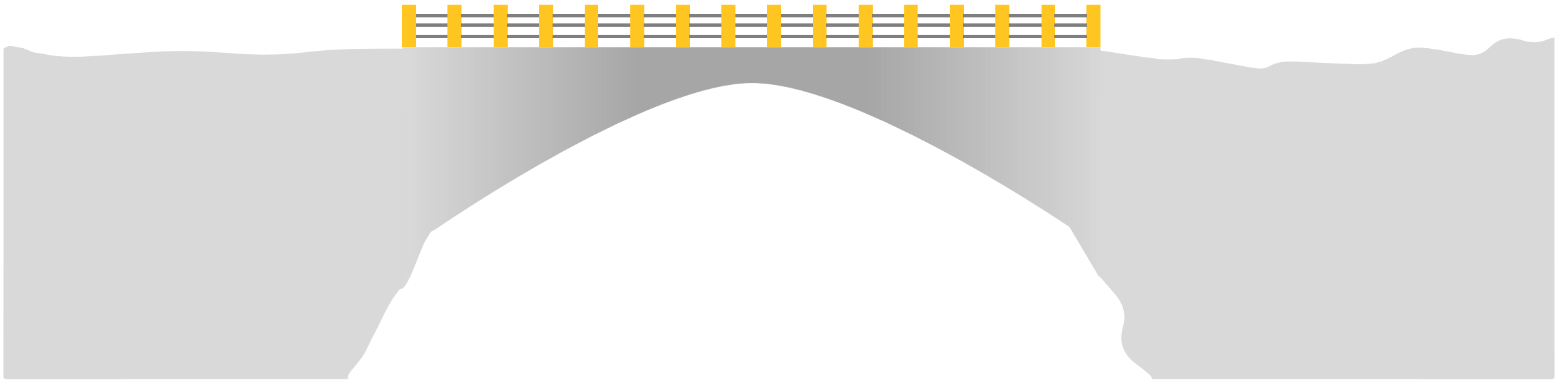


# The Power of Narrative

Using storytelling frameworks to make your research findings compelling and memorable

# Story-telling framework: Simple 3-Act Structure

Human brains are wired to follow narrative patterns



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Human brains are wired to follow narrative patterns



## Act 1: The Setup (Problem/Challenge)

- **Outline their quest:** Present the current situation or challenge. *Systematic Review Session: "Your job as a researcher is to find the most complete, unbiased answer possible"*
- **Establish the stakes:** Why should the audience care? *EndNote Session: "Meet Tom, who spent 3 hours last week reformatting citations..."*
- **Create tension that needs resolution:** *Literature Review Session: "You found 15 studies that support your hypothesis and feel ready to move forward. But here's the problem: you've only scratched the surface. Contradictory evidence and critical gaps are hiding in plain sight."*

# Story-telling framework: Simple 3-Act Structure

Human brains are wired to follow narrative patterns

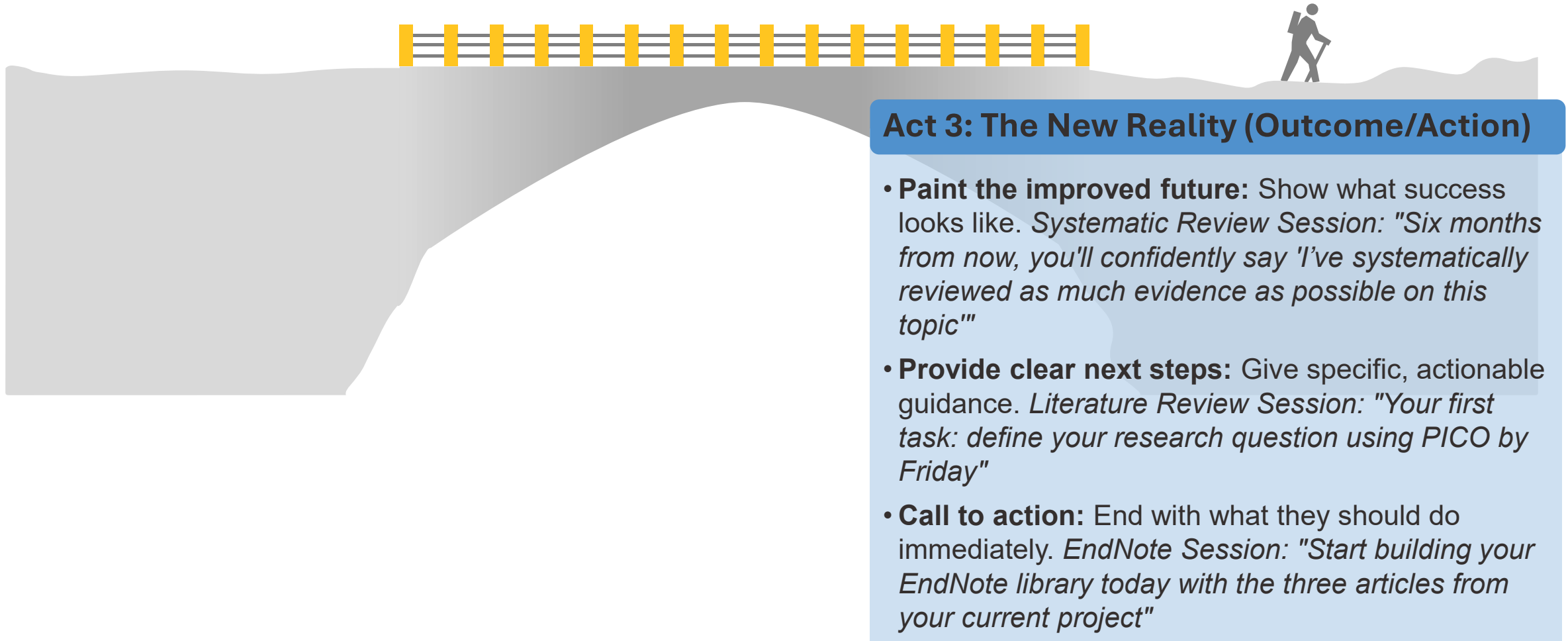


## Act 2: The Journey (Solution/Process)

- **Introduce your solution:** Show how to address the challenge. *Systematic Review Session: "Today we'll learn the systematic review process that ensures you find ALL the evidence, not just the convenient evidence"*
- **Guide through the process:** Demonstrate steps and methodology. *EndNote Session: "Watch as we transform Tom's chaotic citation process into a streamlined workflow using EndNote"*
- **Address obstacles:** Show how to overcome common hurdles. *Literature Review Session: "Let's break down how to build a solid search strategy."*

# Story-telling framework: Simple 3-Act Structure

Human brains are wired to follow narrative patterns



# Using Metaphors to Explain Complex Concepts



## Puzzle Framework

"Finding reliable health information online is like working a jigsaw puzzle. PubMed gives you the corner pieces, but you need other databases to complete the picture"



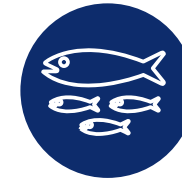
## The GPS Navigation

"Regular literature reviews are like asking for directions. Systematic reviews are like GPS, they show you every possible route and help you choose the best one"



## The Mountain Climb

"Learning evidence-based practice is like climbing a mountain, the view from the top is worth it, but you need the right gear and a good guide"



## The Fishing Trip

"Googling your research topic is like fishing with a single hook in a crowded pond. Using multiple medical databases is like having professional nets in pristine waters"



## The Construction Framework

"We're building a house of evidence. Each study is a brick, and we need all the bricks to build something that won't collapse under scrutiny"



## The Journey/Treasure Map

"Your clinical question is the X that marks the spot. PICO formatting is your treasure map,. Without it, you're just wandering around hoping to stumble onto evidence"

# “Everything is Equally Important”

A librarian was scheduled to give a 50-minute 'Introduction to Research Resources' session for incoming graduate students. They were excited - finally, enough time to be comprehensive! They'd prepared slides covering the library's full range of services.

They started strong: 'Today we'll cover everything you need to know about research support!' Then they launched into their grand tour: 5 minutes on the catalog, 5 minutes on interlibrary loan, 5 minutes on database access, 5 minutes on citation management, 5 minutes on research consultations, 5 minutes on data management, 5 minutes on study spaces, 5 minutes on printing services, 5 minutes on archives access, and 5 minutes on .....

Every topic got the same enthusiastic treatment. They explained the nuances of renewing books with the same detail as finding peer-reviewed articles. They spent as much time on how to reserve a group study room as on how to access databases from off-campus.



# “Everything is Equally Important”

Forty-five minutes in, one student asked, 'But what if I just need to find some basic sources for my first research paper?' They replied, 'Oh, we'll get to search strategies after I finish explaining our digitization services and special collections policies!'

By the end, they'd covered 15 different services with equal enthusiasm. Students left with glazed expressions, furiously scribbling notes about everything from microfilm readers to manuscript archives.

When asked later what they remembered from the session, most said 'Something about... a lot of stuff the library does?'



# “Everything is Equally Important”

They prepared a comprehensive session ...  
but forgot to prioritize what matters

## ● Purple Group, type your responses into chat:

If you were the librarian in this situation, what  
would you do to improve this session?

## ● Yellow Group, you may be called on to:

Summarize one or more of the responses made  
by members of the Purple Group.



# “Everything is Equally Important”

They've prepared a comprehensive session ... but forgot to prioritize what matters

## Prioritize Pain Points

Address their biggest frustrations first, not your most exciting features.

### Ask yourself:

- *"What's the biggest barrier preventing students from succeeding with their project?"* → Start there.
- *What causes the most reference desk tickets?* → Prioritize that.
- *What do faculty complain about most?* → Focus on fixing it.

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## Use a Good Hook

Use what you've prioritized as a “hook” for them to focus in on your message.

### Problem → Solution → Benefits

"Avoiding Predatory Publishing Traps"

- Problem: Researchers falling victim to predatory journals
- Solution: Systematic journal evaluation criteria
- Benefits: Protected reputation

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## Big 3 Takeaways

Limit sessions to 3 core takeaways, then layer on enhancements if time allows.

### Examples:

- *Database demo:* Search, filter, export. Add advanced features as needed.
- *Research consultation:* How to book, what to bring, what to expect. Cover the comprehensive subject guide tour if time allows.

“

The human brain starts working the moment you are born and never stops until you stand up to speak in public.

George Jessel

*Actor and Film Producer*

”

# Flow and Engagement

Techniques to connect with your audience and maintain energy throughout your presentation

# Warming up the crowd

A librarian was scheduled to give a 30-minute virtual session on 'Finding Grey Literature' to a graduate student writing group. He joined the Zoom meeting right on time and saw 12 people already waiting, but he immediately muted himself and started arranging his notes.

For three minutes, he said nothing while latecomers trickled in. No 'Good morning!' No 'Thanks for having me.' No acknowledgment of the organizer who'd invited him. People sat in awkward silence, staring at a blank screen with his camera off.

Finally, he cleared his throat and began in a barely audible voice: 'Um, okay, so... I guess we should start. Today we're going to talk about finding grey literature sources.' His voice was so quiet that someone immediately typed in chat: 'Could you speak louder please?'



# Warming up the crowd

He then launched straight into screen sharing without introducing himself, asking who was in the room, or finding out what they were working on. No warm-up questions. No energy. No connection. Just a monotone explanation of database searching while participants' cameras stayed off and chat remained silent.

Twenty-five minutes of dry content delivery later, he ended with: 'Okay, that's everything. Um, any questions? No? Okay, bye.' The meeting ended abruptly. No one had said a word except to ask him to speak up.



# Warming up the crowd

## What happened?

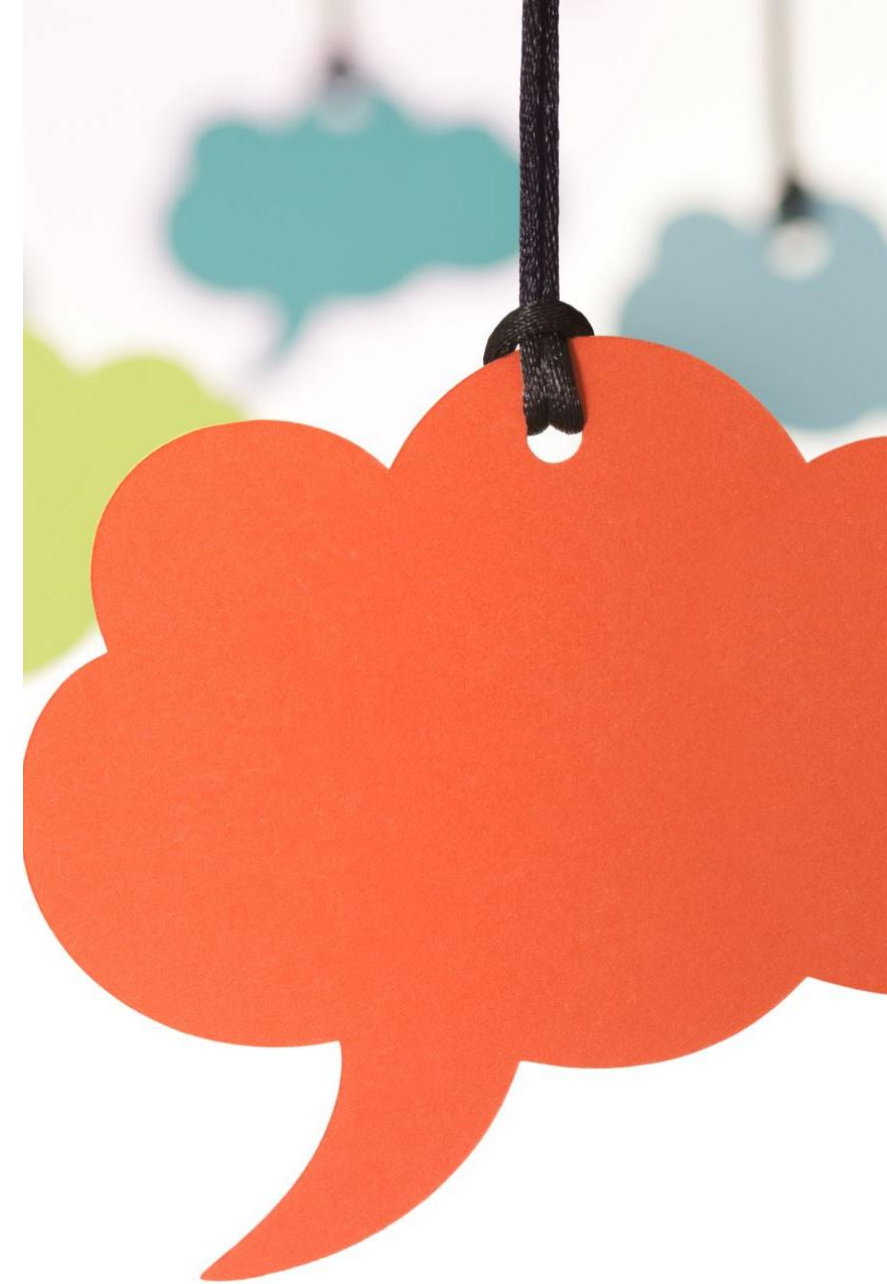
He treated the audience like strangers ....instead of collaborators.

## Chatterfall

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3. **Don't hit Enter yet!!** Keep typing for 1-2 minutes
4. When I say **"Send!"** – everyone hits "Enter" at once
5. Watch the chat **"waterfall"** of responses appear

## Prompt:

What has a presenter has done that made you feel more welcomed, recognized, or engaged?



# Warming up the crowd

He treated the audience like strangers ....instead of collaborators.

---

## Elements for Engagement

- **Energy:** Exude positive atmosphere & be engaging from the start
- **Connection:** Use their names to create one-on-one connections
- **Warmth:** Use a warm, conversational tone (not monotone lecture voice)
- **Interest:** Vary your pace and inflection to maintain interest

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## Before You Start:

Try to greet people personally as they are coming in: *"Hi Sarah. So glad you're here. Hi Jane. Nice to meet you."*

## Opening Words:

Acknowledge the organizer and the group: *"Good morning everyone! Thanks, Dr. Martinez, for inviting me. I'm glad to be here with all of you."*

## Introduce Yourself:

Share who you are and why you're excited to help them: *"I'm Alex, your subject librarian for biology. I've helped hundreds of grad students navigate publishing, and I love solving research puzzles!"*

## Set the Tone:

Show energy and enthusiasm for what's coming: *"I'm excited to share some tools today that should save you time and energy."*

## First Engagement:

Get them participating before jumping into content: *"Give me one word in the chat that describes your current research status"*

# The “Glazed-Eye Epidemic”

A librarian was midway through her 'Citation Management Mastery' session for graduate students when she noticed the warning signs. First, someone in the front row started checking their phone. Then another student began responding to emails. By the 20-minute mark, half the room was mentally checked out.

She pressed on with her carefully prepared slides about Zotero features, but the energy was draining from the room like air from a punctured balloon. Determined to get through her material, she kept talking about citation styles and folder organization while the audience disappeared into their devices. 'And here's how you create subgroups,' she said to a room where only three people were still looking at the screen.



# The “Glazed-Eye Epidemic”

When she asked, 'Any questions about automatic citation generation?' the silence was deafening. Not because they understood everything, but because they'd mentally left the building.

She finished her presentation to a room full of physical bodies but absent minds. She'd delivered technically accurate content about a useful tool but failed to create any genuine connection or engagement. Her expertise was solid, but her audience was lost.



# The “Glazed-Eye Epidemic”

## What happened?

She is delivering great content ... but nobody's actually listening

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## Prompt:

What things has a presenter done that immediately re-engaged you when you were zoning out?



# The “Glazed-Eye Epidemic”

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## Periodic Check-Ins

**Chat responses:** *"Type 1 if you've published before, 2 if working on first paper, 3 if just starting research."*

**Zoom reactions:** *"Thumbs up if predatory journals concern you, thumbs down if not on your radar."*

**Fist-to-five:** *"Hold up fingers 1-5: How confident with peer review? 1 = never heard of it, 5 = I've peer-reviewed papers."*

**Chatterfall:** *"Turn to chat – 2 minutes to type something you've learned about predatory journals!"*

**Show of hands:** *"Raise hand if you've submitted a manuscript. Keep it up if you've been through peer review."*



## Discussion Techniques

**Use names strategically:** *"James just said X. Who can add to that or disagree?"*

**Fishbowl:** 3-4 people have cameras on for discussion while others listen

**Hypothetical scenarios:** *"Your advisor says submit to Nature, but deadline is 2 weeks. What do you do?"*

**Experience sharing:** *"What's the worst publishing advice you've ever received?"*

**Choose your adventure:** *"We have 4 databases we can choose from today – which would you like me to cover?"*

# The “Glazed-Eye Epidemic”

You're delivering great content ... but nobody's actually listening

---



## Micro-Summaries

**"Before we move on..."** *"So far we've covered three types of peer review: single-blind, double-blind, and open. Now let's talk about what happens after acceptance."*

**Key takeaway:** *"Predatory journals prey on urgency and a lack of information. Next, let's learn how to identify them."*

**Build on previous:** *"Now that you know the submission process, let's tackle the scary part: dealing with reviewer comments."*



## Things to Keep in Mind

**Try not to talk for more than 7-10 minutes** without interaction. Build in polls, questions, or activities every few minute

**Use gallery view** in Zoom. It's easier to see who wants to speak

# Resources and Tools

- **Professional presentations:** Use Mentimeter for sophisticated engagement without sacrificing professionalism
- **Training sessions:** Kahoot creates unforgettable, high-energy learning experiences
- **Quick check-ins:** Native platform tools (Zoom/Teams Polls) maintain seamless flow
- **Audience size matters:** Kahoot and Mentimeter scale better for large audiences
- **Follow-up strategy:** Mentimeter provides best data for post-presentation analysis



# Kahoot!



# Post-Presentation Evaluation

## Survey questions to ask:

- **Clarity Check:** "Which concept from today's session was clearest to you? Which was most confusing?"
- **Relevance Test:** "What from today's session will you use within the next month?"
- **Engagement Gauge:** "What kept you most engaged during the presentation?"
- **Missing Pieces:** "What question do you still have that wasn't addressed?"
- **Format Feedback:** "What would have made this session more useful for you?"

# Post-Presentation Evaluation

## Survey questions to ask:

- **Clarity Check:** "Which concept from today's session was clearest to you? Which was most confusing?"
- **Relevance Test:** "What from today's session will you use within the next month?"
- **Engagement Gauge:** "What kept you most engaged during the presentation?"
- **Missing Pieces:** "What question do you still have that wasn't addressed?"
- **Format Feedback:** "What would have made this session more useful for you?"

## Quick Tips:

- Consider using tools like Google Forms, SurveyMonkey, or even simple Zoom polls for immediate feedback
- Send surveys within 24 hours while the session is fresh
- Keep surveys to 5 questions maximum, people won't complete long ones
- Use a mix of multiple choice and one open-ended question
- Follow up on patterns you notice, if 3+ people mention the same confusion, address it in your next session

Break -10 minutes



Clutter and confusion are failures of design, not attributes of information.

Edward Tufte

*Statistician and Professor*



# Design Principles That Work

Seven design principles for creating visually engaging slides that support your message

# Early 1990's: The Outline Era

## EndNote Training Workshop

- I. Introduction to EndNote
- II. Creating Your Library
- III. Importing References
- IV. Formatting Citations
- V. Managing Your Database
- VI. Advanced Features
- VII. Troubleshooting Tips

*\*See handout for details*

## **Characteristics**

- Major headers only on slides
- Comprehensive printed handouts
- Minimal visual design
- Focus on verbal delivery

## **What drove this?**

Limited technology, expensive printing, audience expected takeaways

# Late 1990's early 2000's: The Text-Heavy Era

## Getting Started with EndNote Citation Management

- Download EndNote from library website
- Create new library file (.enl extension)
- Set up connection files for databases:
  - PubMed connection
  - Web of Science connection
  - Library catalog connection
- Import references from databases
- Manually enter book references
- Choose citation style (APA, MLA, Chicago)
- Insert citations in Word document
- Generate bibliography automatically
- Back up your library regularly



## Characteristics

- Slides packed with bullet points
- Small fonts, lots of text
- Reading directly from slides
- Handouts became slide printouts

## What drove this?

PowerPoint arrived, novelty, fear of forgetting content, "comprehensive = good"

# Mid-2000's: The Template & Animation Era

**Master**

**EndNote**

**Like a Pro!**

- ❖ Create your personal reference library
- ❖ Import citations from any database
- ❖ Format perfect bibliographies
- ❖ Works easily with Microsoft Word
- ❖ Choose from 6000+ citation styles



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

## Characteristics

- Elaborate slide transitions
- Clip art everywhere
- Decorative templates
- Text flying in from all directions

## What drove this?

Discovery of PowerPoint's "features" like clip art, animations, and fancy templates with little visual design awareness

# 2010s: The Big Image Era



## Characteristics

- Full-bleed photography
- Minimal text overlay
- Clean, minimal design
- Emphasis on storytelling

## What drove this?

Influenced by TED talks and design thinking. One massive image per slide, minimal text, storytelling focus, design minimalism, mobile/social media aesthetics

# Late 2010s early 2020s: The Hybrid Era

## Endnote



Create your personal reference library



Import citations from any database



Format perfect bibliographies instantly



Sync with Microsoft Word seamlessly



Choose from 6000+ citation styles



## Characteristics

- Zoom/hybrid optimization
- Interactive polls and Q&A
- Accessible design focus
- Scannable, reference-friendly slides

## What drove this?

*COVID-19, remote work, accessibility awareness, shorter attention spans*

# 2025: The Era of Intelligent Design

## Microsoft Designer

- Built into PowerPoint & Office 365
- Still developing AI features
- Less creative than competitors

**Best For:** Organizations already using Office 365, professional presentations

## Canva

- Huge template library
- Excellent stock photo integration
- Great for social media formats
- Subscription required for best features

**Best For:** Creative presentations, social media content, visual-heavy slides

## SlidesAI

- Works as add-on from the Google Workspace Marketplace
- Converts written content into slides automatically
- Limited customization without manual edits

• **Best for:** Educators, marketers, or researchers needing fast slide creation from text-heavy content

## Gamma

- AI-assisted slide creation with a focus on storytelling
- Modern templates and clean layouts
- Subscription required for best features

**Best for:** Pitch decks, idea sharing, interactive presentations with a polished look

# How This Next Section Works

We're not here to judge... just to improve!

1. **See It:** I'll show you an example slide that has a design issue.
2. **Spot It:** We'll identify what's not working and why.
3. **Fix It:** Then we'll walk through a better version and talk about the design principle behind the fix.



**Social Media tools for academia**

Which to use? How familiar are you with them?

- ▶ **Twitter** : 'now happening' research
- ▶ **Google Scholar** : profile & citations
- ▶ **Blogs** : news, research & events
- ▶ **Academia.edu /ResearcherID**: profiles & academic networking & collaboration
- ▶ **Facebook** : invitation only groups ~ subject focus
- ▶ **LinkedIn** : job hunting Etc.

I want to look into common cold and vitamin C.  
I have to be structured when I search and have a searchable and clearly defined research question. The PICO model can help me:

**P**atient/  
Population/Problem  
Common cold

**I**ntervention  
Vitamin C

**C**omparison  
Control  
?

**O**utcome  
?

OR  
Common cold  
Vitamin C  
OR  
Look for subject terms like MESH  
Ascorbic acid

AND

PubMed search: common cold AND (vitamin c OR ascorbic acid)

**Copyright 101**

- Legal protection automatically provided to authors original works of authorship (except *Work for Hire*)
- Content has to be recorded in a tangible, fixed form
- **Excluded:** ideas and facts; news of the day; political speeches, official/government documents
- **Exclusive rights:** moral rights; distribution; make copies; make derivative works; display or broadcast; sell
- Copyright expires 50-100 yrs after death of author and the work goes into the public domain
- Transferring copyright
- Fair exceptions to exclusive copyright: fair use, fair practice, fair dealing

**Different Referencing Style**

**MLA**  
Shankar, S., and M. M. Mayuram. "Effect of strain hardening elastic-plastic transition behavior in a hemisphere in contact with a rigid flat." *International Journal of solids and structures*45.10 (2008): 3009-3020.

**APA**  
Shankar, S., & Mayuram, M. M. (2008). Effect of strain hardening in elastic-plastic transition behavior in a hemisphere in contact with a rigid flat. *International Journal of solids and structures*, 45(10), 3009-3020.

**Chicago**  
Shankar, S., and M. M. Mayuram. "Effect of strain hardening in elastic-plastic transition behavior in a hemisphere in contact with a rigid flat." *International Journal of solids and structures*45, no. 10 (2008): 3009-3020.

**Harvard**  
Shankar, S. and Mayuram, M.M., 2008. Effect of strain hardening in elastic-plastic transition behavior in a hemisphere in contact with a rigid flat. *International Journal of solids and structures*, 45(10), pp.3009-3020.

**Vancouver**  
Shankar S, Mayuram MM. Effect of strain hardening in elastic-plastic transition behavior in a hemisphere in contact with a rigid flat. *International Journal of solids and structures*. 2008 May 15;45(10):3009-20.

**Our assumptions**

- All liaison librarians need a basic knowledge of research data management (RDM).
- RDM is part of the librarian's toolkit for serving faculty research needs.
- We don't all need to be data experts, just as we aren't experts in many areas that we cover.
- RDM is one of many topics we discuss with faculty over time, like collections, instruction, course guides, and student research.
- Our faculty may not know RDM terms or may not understand what our institutional repository or other archives can do with data.
- Humanists may react negatively to the term "data."
- (Optional): we can faculty by reading their drafts of data management plan: if we don't understand, reviewers won't either.
- Knowing data concepts enhances our role & expands our visibility.
- Data collection and the data lifecycle are part of where we help with curation in the library.
- This is a new knowledge area for all academic librarians.

# 1

## Design Pitfall: Background Overload

### Issues:

- **Background Overload:** Background image overwhelms the text
- **Readability Problems:** Hard to read even with bold fonts and shadows
- **Competing Elements:** Audience focuses on decoration, not content



[https://www.slideshare.net/slideshow/amaccfv-library-orientation-2015/49000102?from\\_search=0#6](https://www.slideshare.net/slideshow/amaccfv-library-orientation-2015/49000102?from_search=0#6)

# 1

## Design Pitfall: Background Overload

### Issues:

- **Background Overload:** Background image overwhelms the text
- **Readability Problems:** Hard to read even with bold fonts and shadows
- **Competing Elements:** Audience focuses on decoration, not content

### Improvements:

- **Choose Simple Backgrounds:** Use plain or very subtly textured backgrounds
- **Make Images Secondary:** If using images, blur them heavily (20-50% transparency)



# Rules and Regulations

## Guidelines for a Productive Learning Environment

**Welcome to Galter Health Sciences Library & Learning Center!**  
**To ensure a respectful and productive environment for all members of our community, please familiarize yourself with our library policies and guidelines.**

# 2

## Design Pitfall: Layout Chaos

### Issues:

- **Layout Chaos:** Eye doesn't know where to look first
- **Competing Elements:** Competing arrows and emphasis styles
- **No Visual Hierarchy:** Inconsistent alignment and spacing

10

I want to look into common cold and vitamin C.  
I have to be structured when I search and have a searchable and clear defined research question. The PICO model can help me:

Patient/ Population/Problem	Intervention	Comparison Control	Outcome
Common cold	Vitamin C	?	?
Common cold	Vitamin C OR Ascorbic acid		

Look for subject terms like MESH

www.ntnu.no

[https://www.slideshare.net/slideshow/2c2d-2015/51898331?from\\_search=0#4](https://www.slideshare.net/slideshow/2c2d-2015/51898331?from_search=0#4)

# 2

## Design Pitfall: Layout Chaos

### Issues:

- **Layout Chaos:** Eye doesn't know where to look first
- **Competing Elements:** Competing arrows and emphasis styles
- **No Visual Hierarchy:** Inconsistent alignment and spacing

### Improvements:

- **Establish a clear entry point:** guide viewers where they should start looking
- **Create a visual hierarchy:** make the most important elements largest and boldest
- **Align elements to a grid:** use consistent margins, spacing, alignment

10

I want to look into common cold and vitamin C.  
I have to be structured when I search and have a searchable and clear defined research question. The PICO model can help me:

**AND**

**P**atient/  
Population/Problem      **I**ntervention      **C**omparison  
Control      **O**utcome

Common cold      Vitamin C      ?      ?

**OR**

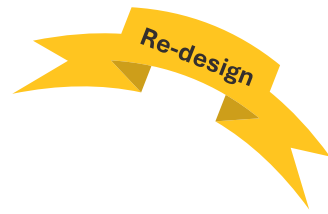
Common cold      Vitamin C  
Look for subject terms like MESH      OR  
Ascorbic acid

↓ ↓ ↓ ↓

NCBI Resources How To  
PubMed.gov PubMed common cold AND (vitamin c OR ascorbic acid) Search  
US National Library of Medicine National Institutes of Health Create RSS Create alert Advanced

www.ntnu.no

[https://www.slideshare.net/slideshow/2c2d-2015/51898331?from\\_search=0#4](https://www.slideshare.net/slideshow/2c2d-2015/51898331?from_search=0#4)



# 2 Use PICO for Structured Searches

*“I want to look into **common cold** and **vitamin C**. I have to be structured when I search and have a clearly defined question.”*

*“The **PICO Model** can help me!”*

**P** **Population/Patient/Problem**  
Who is your study about? What is the condition or problem?  
 (“common cold” **OR** “rhinitis” **OR** “upper respiratory infection”)

AND

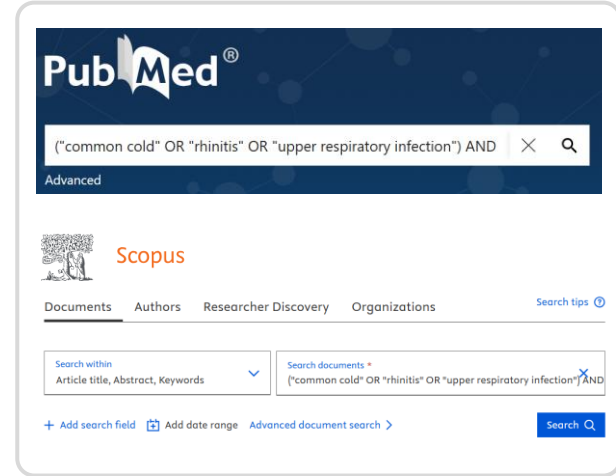
**I** **Intervention**  
What treatment, therapy, or exposure are you investigating?  
 (“vitamin C” **OR** “ascorbic acid” **OR** “L-ascorbate supplementation”)

AND

**C** **Control** *(as needed)*  
What is the alternative to compare against?  
 (“placebo”)

AND

**O** **Outcome** *(as needed)*  
What results or effects are you measuring?  
 (“symptom duration” **OR** “recovery time” **OR** “symptom relief”)



# 3 Design Pitfall: No Clear Takeaway

## Issues:

- **No Clear Takeaway:** Multiple competing messages on one slide
- **Lack of Clear Direction:** Attendees leaving instruction sessions confused about next steps or how to implement new resources

The screenshot shows the NTNU Universitetsbiblioteket website. The navigation bar at the top contains several menu items: AKTUELT, FINN LITTERATUR, FAGRESSURSER, KURS, ENDNOTE, FOR STUDENTER, MEDISINSKE APPER, OM OSS, and IN ENGLISH. The 'FINN LITTERATUR', 'KURS', and 'IN ENGLISH' items are circled in red. Below the navigation bar, the main content area is titled 'Selected databases for health and medicine' and is divided into three columns: Article Search (PubMed, EMBASE, Cochrane Library, PsychINFO), Point of Care Tools (UpToDate, Best Practice, Clinical Evidence), and Citation Databases (Web of Science, SCOPUS, Google Scholar). An orange box highlights the 'Library homepage' link: [www.ntnu.no/blogger/ub-mh/in-english/](http://www.ntnu.no/blogger/ub-mh/in-english/). At the bottom left, there is a 'VPN Client' download button with the Cisco logo. At the bottom right, there is a section for 'Courses in English from the Medicine and Health Library' with text about information skills training for PhD students. The footer contains the URL [www.ntnu.no](http://www.ntnu.no). A dashed arrow points from the 'IN ENGLISH' link in the navigation bar to the orange box containing the library homepage link.

[https://www.slideshare.net/slideshow/2c2d-2015/51898331?from\\_search=0#4](https://www.slideshare.net/slideshow/2c2d-2015/51898331?from_search=0#4)

# 3 Design Pitfall: No Clear Takeaway

## Issues:

- **No Clear Takeaway:** Multiple competing messages on one slide
- **Lack of Clear Direction:** Attendees leaving instruction sessions confused about next steps or how to implement new resources

## Improvements:

- **Clarify Purpose:** Use the "So What?" test for every slide
- **Create a Visual Hierarchy:** Use visual hierarchy to emphasize key points
- **Provide Support:** Include contact information for follow-up
- **Reinforce Messages:** End with 1–3 key takeaways, a call to action, or a recap of your main message

The screenshot shows the NTNU Universitetsbiblioteket website. The navigation bar at the top contains several menu items: AKTUELT, FINN LITTERATUR, FAGRESSURSER, KURS, ENDNOTE, FOR STUDENTER, MEDISINSKE APPER, OM OSS, and IN ENGLISH. The main content area is titled "Selected databases for health and medicine" and is divided into three columns: Article Search (PubMed, EMBASE, Cochrane Library, PsychINFO), Point of Care Tools (UpToDate, Best Practice, Clinical Evidence), and Citation Databases (Web of Science, SCOPUS, Google Scholar). Below this, there is a section for "Courses in English from the Medicine and Health Library" with a call to action to contact post@bmh.ntnu.no. At the bottom, there is a "VPN Client" download button and a footer with the website URL www.ntnu.no. The slide is annotated with red circles around the navigation items and a dashed line pointing to the "IN ENGLISH" link, indicating a lack of clear direction. An orange box highlights the "Library homepage" link.

[www.ntnu.no/blogger/ub-mh/in-english/](https://www.ntnu.no/blogger/ub-mh/in-english/)

[https://www.slideshare.net/slideshow/2c2d-2015/51898331?from\\_search=0#4](https://www.slideshare.net/slideshow/2c2d-2015/51898331?from_search=0#4)

3



Visit us at:  
**galter.northwestern.edu**

### Popular Resources

Look for the Popular Resources section which gives access to frequently used databases like PubMed, UpToDate, and Clinical Key.


### Classes and Events

Look for the Classes and Events section to see upcoming classes and registration links.

### VPN Reminder

Be sure to connect to the Northwestern VPN when accessing library databases off campus.

**Questions?** ghls-ref@northwestern.edu



#### Popular Resources


- [PubMed](#)
- [Ovid MEDLINE](#)
- [UpToDate](#)
- [Ebook Collections](#)
- [ClinicalKey](#)
- [Scopus](#)
- [Prism](#)
- [Galter Guides](#)
- [Mobile Resources](#)
- [Databases](#)
- [Catalog](#)
- [Journals](#)
- [Northwestern Scholars](#)



#### Classes and Events

- [NIH, My NCBI and PMCID's...Virtual Q.&A."Office Hours."](#)  
July 17, 2:00 PM - 3:30 PM
- [Conducting a Systematic Review: Part 1.. Planning the Process](#)  
July 22, 12:00 PM - 1:00 PM
- [10 Simple Rules for Data Cleaning with Excel](#)  
July 30, 10:00 AM - 11:30 AM

[ALL CLASSES >](#)



#### I Need

- [Articles](#)
- [Books and Journals](#)
- [Remote Access to Licensed Resources](#)
- [Liaison Librarians and Research Support](#)
- [Research Tips](#)
- [Subject Resource Recommendations](#)
- [Clinical Tools and Support](#)
- [To Preserve and Share Scholarly Content](#)
- [Student Resources](#)
- [To Order an Article or Book](#)
- [EndNote Support](#)
- [Northwestern Print](#)
- [Staff Directory](#)

# 4 Design Pitfall: Font Style Overload

## Issues:

- **Font Style Overload:** Inconsistent or unnecessary font styles mixing serif, sans serif, and italics in one slide
- **No Visual Hierarchy:** Too many styles make everything look equally important... or equally unimportant
- **Readability Problems:** Some font styles, especially script, novelty, or all caps, are hard to read

## Social Media tools for academia

Which to use? How familiar are you with them?

- ▶ **Twitter** : *'now happening' research*
- ▶ **Google Scholar** : *profile & citations*
- ▶ **Blogs** : *news, research & events*
- ▶ **Academia.edu /ResearcherID**: *profiles & academic networking & collaboration*
- ▶ **Facebook** : *invitation only groups ~ subject focus*
- ▶ **LinkedIn** : *job hunting* *Etc.*

[https://www.slideshare.net/slideshow/social-media-research-43771744/43771744?from\\_search=192#5](https://www.slideshare.net/slideshow/social-media-research-43771744/43771744?from_search=192#5)

# 4

## Font Style Best Practices

Rating my own presentation....



### Limit your choices

Use maximum 2-3 fonts per presentation. One for headers, one for body text, and optionally one for special emphasis.



### Choose Readable Fonts

Sans-serif fonts are generally better for presentation screens. They're cleaner and more readable at a distance.

- Aptos
- Arial
- Calibri
- Helvetica



### Use Emphasis Wisely

**Bold for importance**, *italics for emphasis* or quotes. Avoid overuse - if everything is emphasized, nothing is.



### Size Matters

- Headings: 32–44 pt
  - Body text: 20–28 pt
- Never go below 18 pt, especially for in-person or hybrid audiences.




### Case Considerations

- Sentence case is most readable.
- ALL CAPS feels like shouting.
- Title Case Works for Headers.

# 4 Social Media Tools for Academia

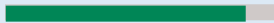
Which platforms should academics prioritize?




 **X (formerly Twitter)**  
Microblogging & News

**Academic Uses:**

- Share research findings & preprints
- Live-tweet conferences & events
- Engage in academic discussions
- Follow journal updates and news

Familiarity:  **Very High**

 **LinkedIn**  
Professional Networking

**Academic Uses:**

- Build professional network
- Share career achievements
- Industry collaboration
- Academic job searching


Familiarity:  **Very High**

 **ORCID**  
Researcher Identity

**Academic Uses:**

- Unique researcher identifier
- Link all publications
- Grant application integration
- Institutional reporting

Familiarity:  **High**

 **Bluesky**  
Decentralized Social

**Academic Uses:**

- Research discussions
- Academic community building
- Conference networking
- Alternative to X/Twitter


Familiarity:  **High**

 **YouTube**  
Video Platform

**Academic Uses:**

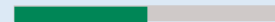
- Research explanation videos
- Conference presentations
- Educational content
- Lab techniques tutorials

Familiarity:  **Very High**

 **Reddit**  
Discussion Forums

**Academic Uses:**

- r/AskScience, r/Academia Q&As
- Research AMAs (Ask Me Anything)
- Peer support communities
- Science communication

Familiarity:  **Medium**

# 5 Design Pitfall: Bullet Point Overload

## Issues:

- **Bullet Point Overload:** Audience tries to read while you speak
- **Key messages get buried:** Important insights lost in paragraphs of explanation
- **Reduced engagement:** People stop looking at slides that feel like documents

## Our assumptions

- All liaison librarians need a basic knowledge of research data management (RDM).
- RDM is part of the librarian's toolkit for serving faculty research needs.
- We don't all need to be data experts, just as we aren't experts in many areas that we cover.
- RDM is one of many topics we discuss with faculty over time, like collections, instruction, course guides, and student research.
- Our faculty may not know RDM terms or may not understand what our institutional repository or other archives can do with data.
- Humanists may react negatively to the term "data."
- (Optional): we can faculty by reading their drafts of data management plan: if we don't understand, reviewers won't either.
- Knowing data concepts enhances our role & expands our visibility.
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- This is a new knowledge area for **all** academic librarians.

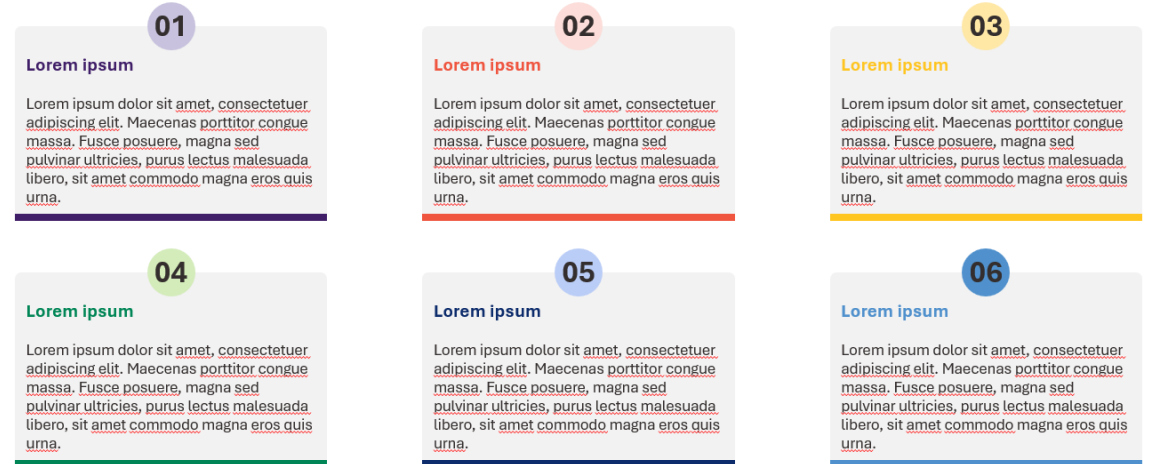


[https://www.slideshare.net/slideshow/research-data-management-in-the-humanities-and-social-sciences/51725727?from\\_search=571](https://www.slideshare.net/slideshow/research-data-management-in-the-humanities-and-social-sciences/51725727?from_search=571)

# 5 Design Pitfall: Bullet Point Overload

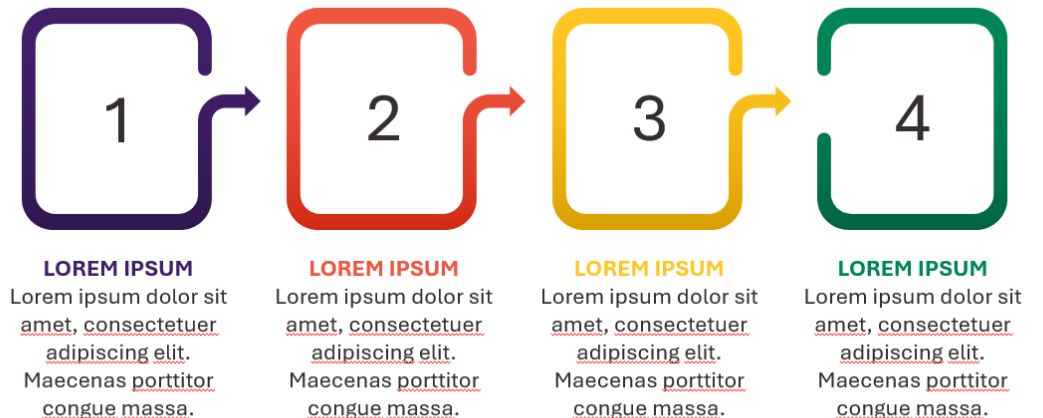
## Improvements:

- **Limit bullet points:** Keep slides focused use only as many bullet points as necessary
- **Write concisely:** Use phrases rather than full sentences
- **Use numbered steps:** Show sequential techniques clearly
- **Progressively reveal points:** Animate appearance or add incrementally to slides



## Resources for Slide Templates

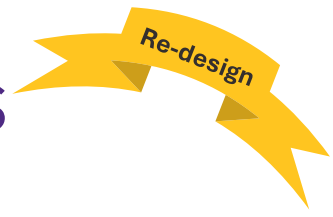
- Power-User Add-in: <https://www.poweruserssoftwares.com/>
- Duarte Slidedocs: <https://www.duarte.com/resources/guides-tools/slidedocs-templates/>
- Canva: <https://www.canva.com/>



# 5

# Research Data Management (RDM) for Librarians

Four core themes that guide our approach to data management support



## Knowledge Foundations

- All librarians need basic RDM knowledge
- We're generalists, not experts – just like other subject areas
- This is a new field for everyone – we're learning together.

## Service Integration

- RDM is part of our toolkit for research support
- One topic among many in ongoing faculty relationships
- Connections to our curation and preservation mission

## Communication Bridge

- Faculty may not know RDM terminology
- May not understand what institutional repositories can do
- Humanists may react negatively to “data”

## Strategic Growth

- RDM knowledge enhances our role
- Expands our visibility as research partners
- Creates long-term institutional value

## 6

# Design Pitfall: Color Overload

## Issues:

- **Color Overload:** Slides with lots of loud or clashing colors can feel disorganized or chaotic
- **Contrast Problems:** Color clutter often leads to low contrast or poor combinations

### Different Referencing Style

KONGU ENGINEERING COLLEGE

MLA

APA

Chicago

Harvard

Vancouver

Shankar, S., and M. M. Mayuram. "Effect of strain hardening in elastic-plastic transition behavior in a hemisphere in contact with a rigid flat." *International Journal of solids and structures* 45.10 (2008): 3009-3020.

Shankar, S., & Mayuram, M. M. (2008). Effect of strain hardening in elastic-plastic transition behavior in a hemisphere in contact with a rigid flat. *International Journal of solids and structures*, 45(10), 3009-3020.

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Shankar S, Mayuram MM. Effect of strain hardening in elastic-plastic transition behavior in a hemisphere in contact with a rigid flat. *International Journal of solids and structures*. 2008 May 15;45(10):3009-20.

[https://www.slideshare.net/slideshow/reference-style-endnote/121287916?from\\_search=6#2](https://www.slideshare.net/slideshow/reference-style-endnote/121287916?from_search=6#2)

# 6

## Color and Contrast

### Improvements:

- **Simplify Palette:** Use a limited palette (2–3 colors + neutrals)
- **Color with Purpose:** Apply color intentionally: to highlight, group, or signal priority
- **Prioritize Contrast:** Ensure high contrast between text and background

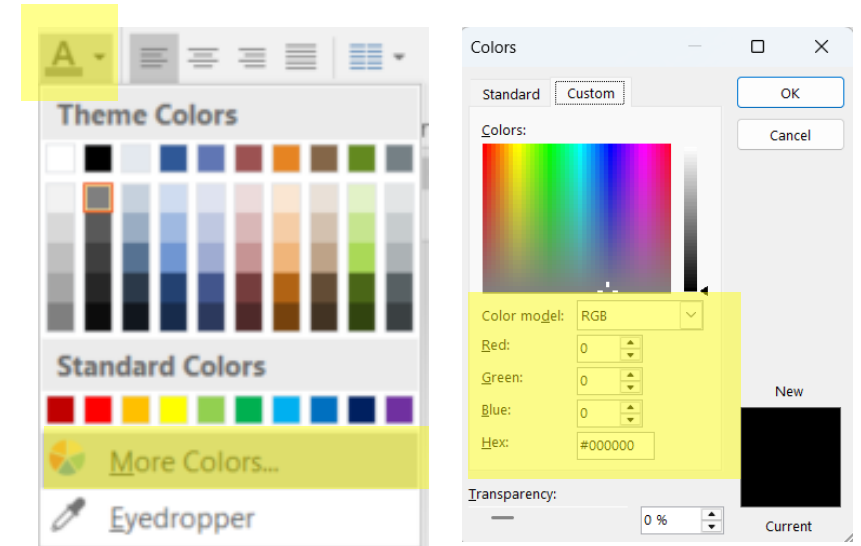


Image: Steps for using custom RGB colors in Microsoft PowerPoint 2016

### Helpful Resources

- Canva's Color Wheel: <https://www.canva.com/colors/color-wheel/>
- Canva Palette: <https://www.canva.com/colors/color-palette-generator/>
- RGB And Hex Color Code Converter: <https://www.rapidtables.com/convert/color/index.html>
- WebAIM's Color Contrast Checker: <http://webaim.org/resources/contrastchecker/>
- ACART's Contrast Checker: <http://www.contrastchecker.com/>

# 6

## Different Referencing Styles

### APA Style

Shankar, S., & Mayuram, M. M. (2008). Effect of strain hardening in elastic-plastic transition behavior in a hemisphere in contact with a rigid flat. *International Journal of Solids and Structures*, 45(10), 3009-3020.

### MLA Style

Shankar, S., and M. M. Mayuram. "Effect of strain hardening in elastic-plastic transition behavior in a hemisphere in contact with a rigid flat." *International Journal of Solids and Structures* 45.10 (2008): 3009-3020.

### Chicago Style

Shankar, S., and M. M. Mayuram. "Effect of strain hardening in elastic-plastic transition behavior in a hemisphere in contact with a rigid flat." *International Journal of Solids and Structures* 45, no. 10 (2008): 3009-3020.

### Harvard Style

Shankar, S. and Mayuram, M.M., 2008. Effect of strain hardening in elastic-plastic transition behavior in a hemisphere in contact with a rigid flat. *International Journal of Solids and Structures*, 45(10), pp.3009-3020.

### Vancouver Style

Shankar S, Mayuram MM. Effect of strain hardening in elastic-plastic transition behavior in a hemisphere in contact with a rigid flat. *International Journal of Solids and Structures*. 2008 May 15;45(10):3009-20.

### Author Name Format:

- **APA:** Shankar, S., & Mayuram, M. M.
- **MLA:** Shankar, S., and M. M. Mayuram
- **Chicago:** Shankar, S., and M. M. Mayuram
- **Harvard:** Shankar, S. and Mayuram, M.M.
- **Vancouver:** Shankar S, Mayuram MM (*no commas, no periods after initials*)

### Year Placement:

- **APA:** (2008) right after authors
- **MLA:** (2008) near the end
- **Chicago:** (2008) at the end
- **Harvard:** , 2008 after authors with comma
- **Vancouver:** 2008 May 15 at the end with full date

### Title Treatment:

- **APA:** Sentence case, no quotes
- **MLA:** "Title case in quotes"
- **Chicago:** "Title case in quotes"
- **Harvard:** Title case, no quotes
- **Vancouver:** Sentence case, no quotes, ends with period

### Journal Information:

- **APA:** *Journal*, volume(issue), pages
- **MLA:** *Journal* volume.issue (year): pages
- **Chicago:** *Journal* volume, no. issue (year): pages
- **Harvard:** *Journal*, volume(issue), pp.pages
- **Vancouver:** *Journal*. Year Date;volume:pages

Re-design

# Time Check!

With only 20 minutes left, what would you like us to focus on?

## Option 1

### **Designing Information Experiences – 20 minutes**

Using charts, graphs, and visuals to tell compelling stories with your research findings.

**OR**

## Option 2

### **When Things Go Wrong – 10 minutes**

Preparing for and recovering from technical failures during presentations.

### **Start Small, Build Momentum – 5 minutes**

Action items and resources to continue improving your presentation skills.

“

Design is thinking made visual.

Saul Bass

*Graphic Designer and Filmmaker*

”

# Designing Information Experiences

Using charts, graphs, and visuals to tell compelling stories with your research findings

# Think Beyond Slides to Create Understanding

**1 Charts & Graphs:** Show trends, comparisons, and relationships

**2 Tables:** Organize data for easy comparison and reference

**3 Infographics:** Combine data with visual storytelling



# Think Beyond Slides to Create Understanding

- 1 Charts & Graphs:** Show trends, comparisons, and relationships
- 2 Tables:** Organize data for easy comparison and reference
- 3 Infographics:** Combine data with visual storytelling

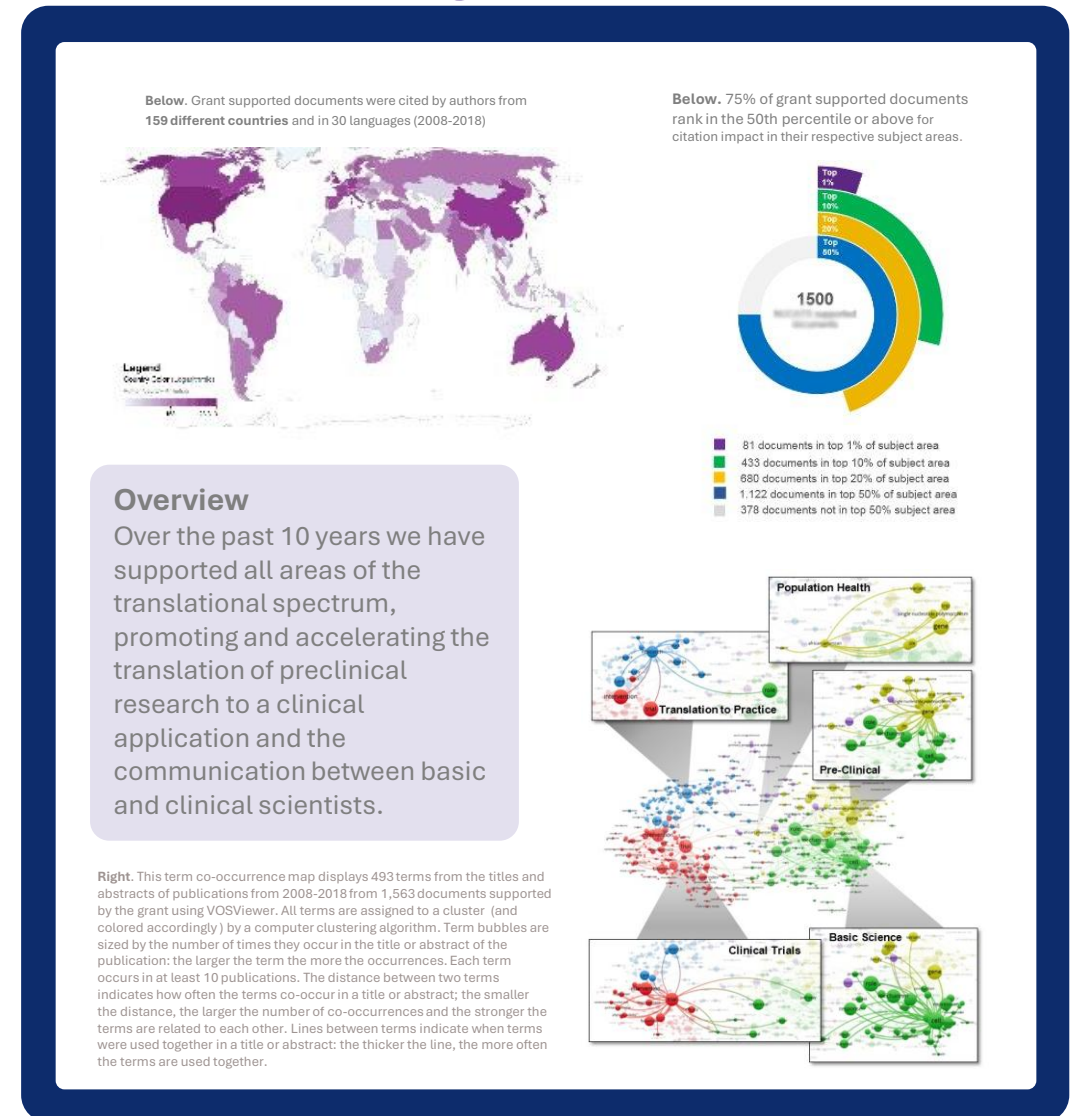
	Advantages	Challenges	Support
Excel	<ul style="list-style-type: none"> <li>High familiarity,</li> <li>Compatible w/ Microsoft products,</li> <li>Easy to edit/analyze underlying data</li> </ul>	<ul style="list-style-type: none"> <li>No report portal</li> <li>VBA &amp; Macros have low familiarity</li> <li>May need add-ons for some chart types</li> </ul>	<ul style="list-style-type: none"> <li>How to Build Data Visualizations in Excel: <a href="https://stephanieevergreen.com/how-to/">https://stephanieevergreen.com/how-to/</a></li> </ul>
Google Charts	<ul style="list-style-type: none"> <li>Free</li> <li>Interactive charts</li> <li>Compatible with Google Sheets</li> </ul>	<ul style="list-style-type: none"> <li>Some familiarity with JavaScript</li> <li>Difficult to edit or analyze underlying data</li> </ul>	<ul style="list-style-type: none"> <li>Google Charts: <a href="https://developers.google.com/chart">https://developers.google.com/chart</a></li> </ul>
Python or R	<ul style="list-style-type: none"> <li>Free</li> <li>Highly customizable charts</li> <li>Powerful data analysis tool</li> <li>Interactive charts</li> </ul>	<ul style="list-style-type: none"> <li>Requires familiarity with the language</li> <li>Ability to access <a href="#">Jupyter Lab</a> or <a href="#">R Studio</a></li> </ul>	<ul style="list-style-type: none"> <li><a href="https://jupyter.org/">JupyterLab</a>: <a href="https://jupyter.org/">https://jupyter.org/</a></li> <li><a href="https://www.rstudio.com/">R Studio</a>: <a href="https://www.rstudio.com/">https://www.rstudio.com/</a></li> </ul>
Tableau	<ul style="list-style-type: none"> <li>Customizable and interactive charts</li> <li>Integrates with Python or R</li> </ul>	<ul style="list-style-type: none"> <li>Only Tableau Public is free making your underlying data and visualizations open to the public</li> </ul>	<ul style="list-style-type: none"> <li>Tableau Public Support: <a href="https://www.tableau.com/support/public">https://www.tableau.com/support/public</a></li> </ul>

	Fulfilling journal requirements	Organizing content for discoverability	Ease of promoting content on social media	Improving discoverability for clinicians	Ensuring long term preservation	Creating DOIs for attribution	Increasing impact of content
Respondent 1	Important	Important	Important	Neutral	Neutral	Important	Important
Respondent 2	Neutral	Important	Neutral	Neutral	Neutral	Important	Important
Respondent 3	Important	Important	Neutral	Neutral	Important	Important	Important
Respondent 4	Important	Important	Neutral	Important	Neutral	Important	Neutral
Respondent 5	Important	Important	Important	Neutral	Neutral	Important	Important

# Think Beyond Slides to Create Understanding

- 1 Charts & Graphs:** Show trends, comparisons, and relationships
- 2 Tables:** Organize data for easy comparison and reference
- 3 Infographics:** Combine data with visual storytelling



# Visualization Software

	Advantages	Challenges	Support
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# Resources

## Basic and Advanced Excel:

- Gutzman, K. E., Mendoza, A. R., Norton, C., Belter, C., & Soulakis, M. (2024). Charting a New Course Excel Workbook (v9.0.0). DigitalHub. Galter Health Sciences Library & Learning Center. <https://doi.org/10.18131/1nan8-mzk41>

## Practice data and examples of charts

- Gutzman, K. E., Mendoza, A. R., Norton, C., & Belter, C. (2021). Hands On Creating Basic Charts (v3.0.0). DigitalHub. Galter Health Sciences Library & Learning Center. <https://doi.org/10.18131/g3-69ds-eq61>

# Reduce Visual Clutter: less is often more



1

## Every Element Must Earn Its Place

- Ask: "Does this help or hurt comprehension?"
- Default to removing, not adding
- **Example:** Remove heavy gridlines and borders that compete with data for attention

2

## Empty Space Isn't Wasted Space

- White space improves readability and focus
- Give your data room to breathe
- **Example:** Increase margins around your chart and space between data series

3

## Color Should Guide, Not Overwhelm

- Use color purposefully to highlight what matters most
- High contrast improves accessibility and readability
- **Example:** Use gray for background elements and reserve bright colors for your key data points

# Lead with Meaning: Use Titles & Labels to Answer “So What?”

## Revise the Header to Answer “So What?”

Chart titles shouldn’t just describe the data, they should interpret it. A well-crafted title answers the question: *Why does this matter?*

## Use Informative Labels and Legends

Use legends, axis labels, and annotations to guide interpretation. Every element should support understanding.

## Help the Viewer See the Story

Titles, subtitles, and callouts can spotlight trends or anomalies that might otherwise go unnoticed.

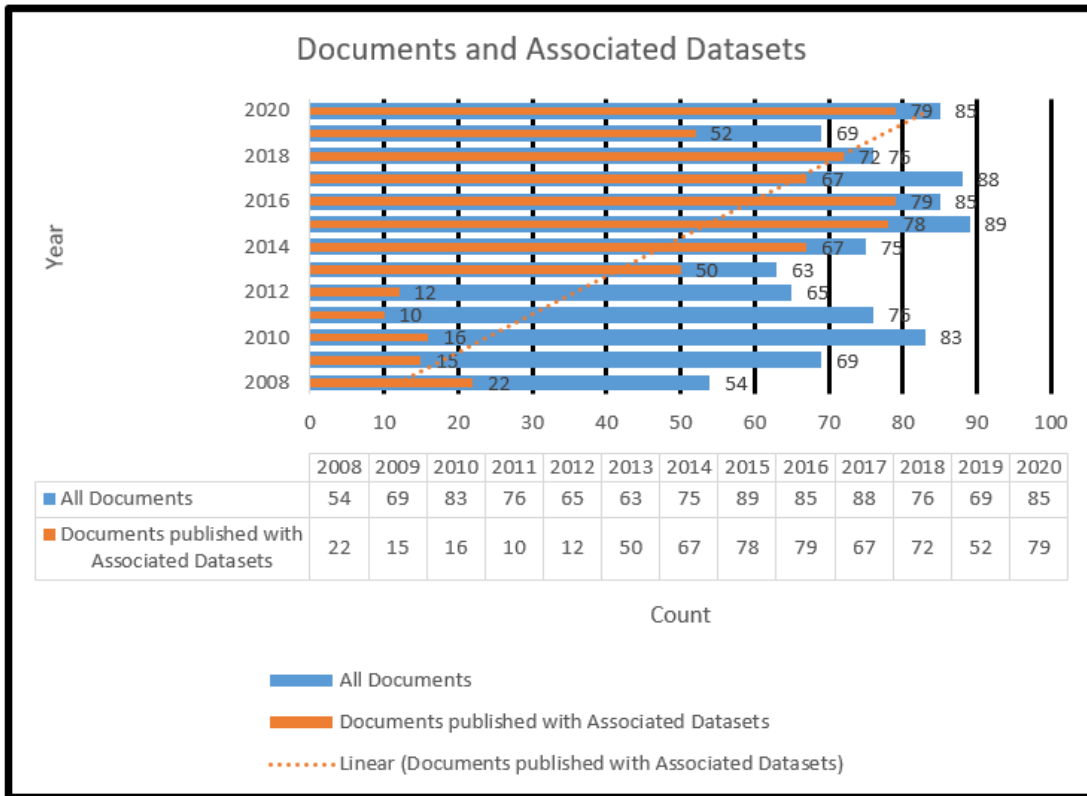
**Answer “So What?” up here.**

**The visual evidence that supports the point goes here.**

Evergreen, Stephanie. So What? Available at:  
<https://stephanieevergreen.com/so-what/>

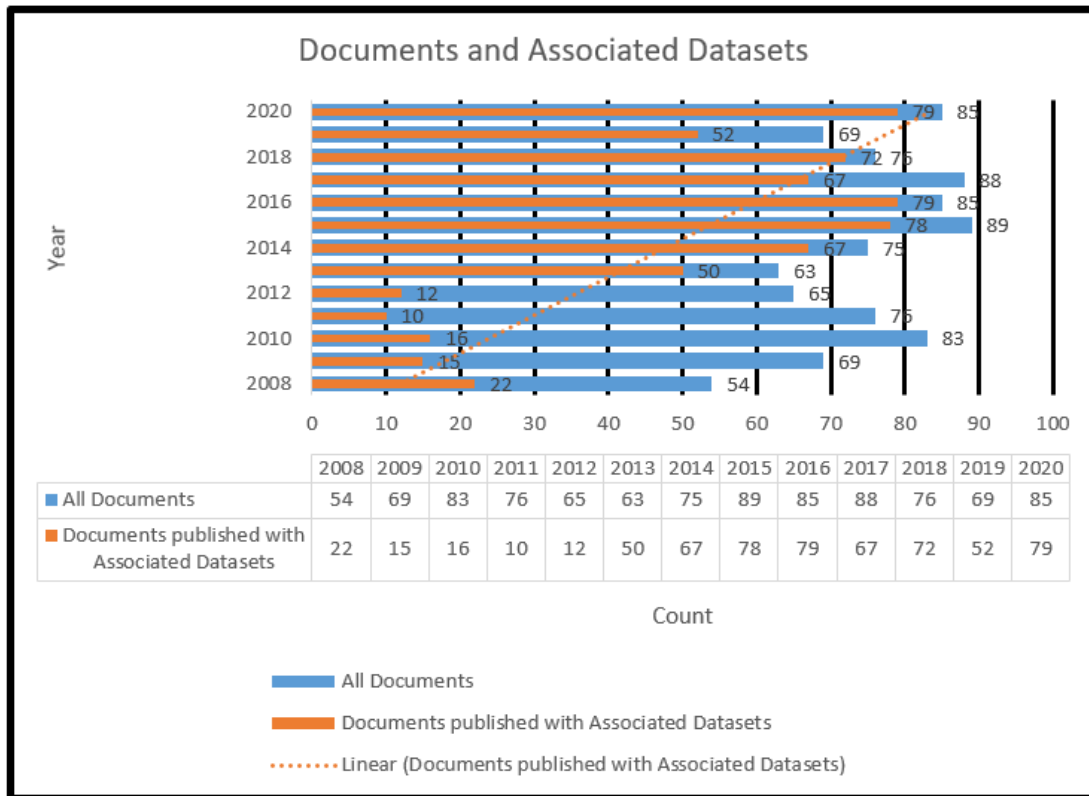
# Chart Re-Design

Let's consider a re-design of this chart by trying to **reduce visual clutter** and transforming the title to **answer the “so what” question**



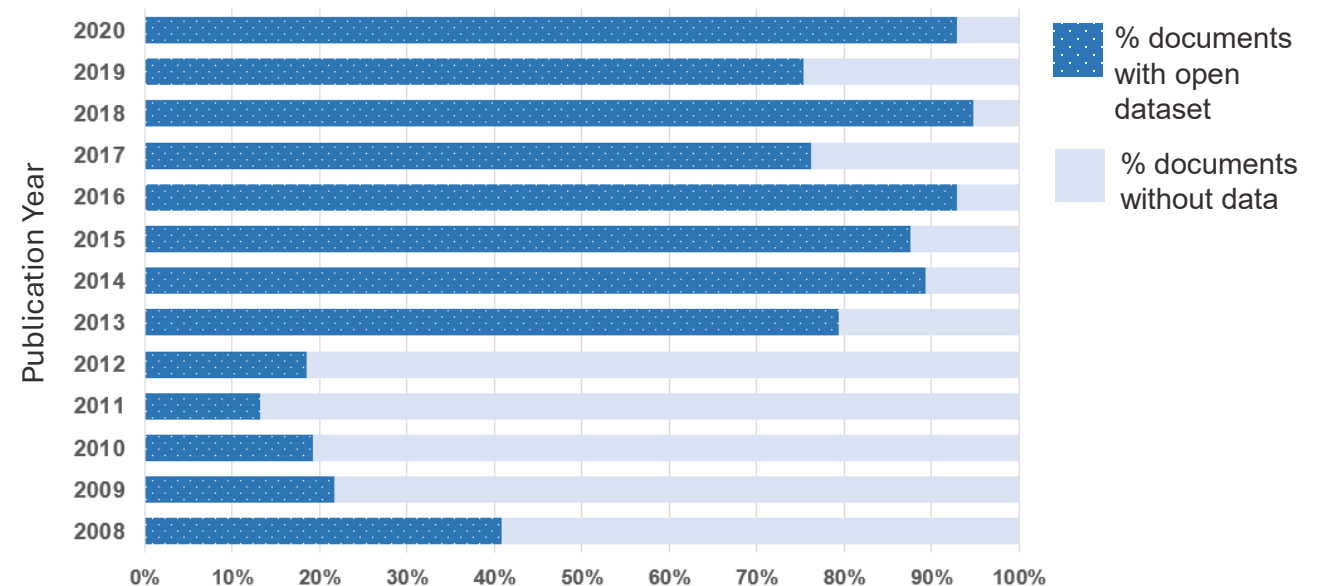
# Chart Re-Design

Let's consider a re-design of this chart by trying to **reduce visual clutter** and transforming the title to **answer the “so what” question**



How effective was the data repository policy in promoting open science practices?

**86% of documents have open datasets** since the 2013 implementation of the Data Repository



# Transform Raw Numbers into Actionable Insights

## When Raw Numbers Feel Abstract

- **Convert to percentages or ratios** - "45% market share" vs. "450,000 customers"
- **Show change over time instead of snapshots** - "Sales up 15%" vs. "Sales = \$2.3M"
- **Use familiar units** - "\$12 per day" vs. "\$4,380 per year"

## When Comparisons Are Difficult

- **Create rankings or categories** - "Top performer" vs. "scored 847 points"
- **Show relative to benchmark** - "20% above average" vs. "3.2 rating"
- **Normalize by population** - "5 per 1,000 residents" vs. "500 total cases"

## When Precision Overwhelms

- **Round to meaningful digits** - "About \$50K" vs. "\$49,847.23"
- **Group into categories** - "High/Medium/Low risk" vs. "Risk scores 1-100"
- **Focus on top performers + "other"** - "Show top 5 + Other" vs. "Show all 47 items"

## Before transforming, ask yourself:

### Accuracy

Does this transformation preserve the truth in my data?

### Clarity

Does this make patterns more or less obvious?

### Relevance

Will this format answer my audience's real questions?

### Ethics

Am I being transparent about what I've changed?

# Try different kinds of charts

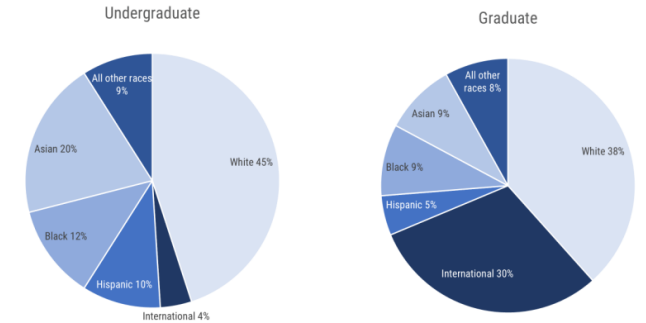
INSTEAD OF  
**TABLE**

	African American	American Indian	Asian/Pacific Islander	Hispanic	White
ACCS:UNINT INJURIES	23.89	13.12	4.44	14.90	22.41
HEART DISEASE	19.33	5.34	3.06	5.58	10.66
CANCER	15.72	4.59	5.77	7.18	13.24
ASSAULT(HOMICIDE)	15.27	2.18	0.77	2.14	1.28
PERINATAL CONDITIONS	8.55	2.61	2.79	3.11	2.71
COVID 19 INFECTION	7.08	1.68	2.03	6.72	2.71
DIABETES	4.20	1.11	0.49	1.61	2.02
INT SELF-HARM	3.89	1.54	2.46	2.76	5.43
STROKE	3.35	0.33	1.26	1.10	1.51
CONGENITAL MALFORMATION	2.71	1.84	1.38	1.70	1.99
CHR LOWER RESP DIS	2.69	0.79	0.19	0.81	2.20
NEPHRITIS	2.08	0.23	0.19	0.58	0.62
SEPTICEMIA	1.78	0.70	0.32	0.71	0.99

INSTEAD OF  
**SINGLE NUMBER**

**53%**  
of our board members are female

INSTEAD OF  
**TWO PIES**



TRY  
**BUMP CHART**



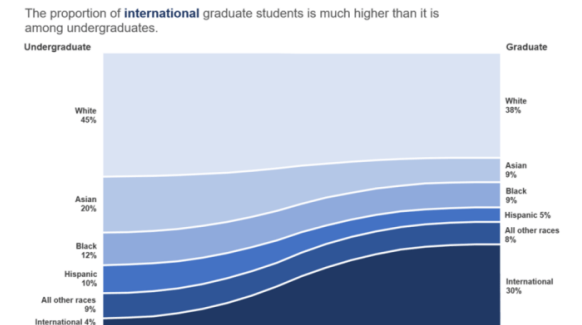
TRY  
**ICON ARRAY**

**62%**  
of our clients said they would recommend us to their friends or family



TRY  
**PROPORTION PLOT**

BY DANIELLE G



Source: You Just Need More Chart Choices. Stephanie Evergreen. <https://stephanieevergreen.com/you-just-need-more-chart-choices/>

# Table Re-Design

Let's consider a re-design of this table by **transforming the data** and **considering different chart types**.

	Relative survival rate, % (SE)			
	5 years	10 years	15 years	20 years
<b>Cancer site</b>				
Oral cavity and pharynx	56.7 (1.3)	44.2 (1.4)	37.5 (1.6)	33.0 (1.8)
Oesophagus	14.2 (1.4)	7.9 (1.3)	7.7 (1.6)	5.4 (2.0)
Stomach	23.8 (1.3)	19.4 (1.4)	19.0 (1.7)	14.9 (1.9)
Colon	61.7 (0.8)	55.4 (1.0)	53.9 (1.2)	52.3 (1.6)
Rectum	62.6 (1.2)	55.2 (1.4)	51.8 (1.8)	49.2 (2.3)
Liver and intrahepatic bile duct	7.5 (1.1)	5.8 (1.2)	6.3 (1.5)	7.6 (2.0)
Pancreas	4.0 (0.5)	3.0 (0.5)	2.7 (0.6)	2.7 (0.8)
Larynx	68.8 (2.1)	56.7 (2.5)	45.8 (2.8)	37.8 (3.1)
Lung and bronchus	15.0 (0.4)	10.6 (0.4)	8.1 (0.4)	6.5 (0.4)
Melanomas	89.0 (0.8)	86.7 (1.1)	83.5 (1.5)	82.8 (1.9)
Breast	86.4 (0.4)	78.3 (0.6)	71.3 (0.7)	65.0 (1.0)
Cervix uteri	70.5 (1.6)	64.1 (1.8)	62.8 (2.1)	60.0 (2.4)
Corpus uteri and uterus, NOS	84.3 (1.0)	83.2 (1.3)	80.8 (1.7)	79.2 (2.0)
Ovary	55.0 (1.3)	49.3 (1.6)	49.9 (1.9)	49.6 (2.4)
Prostate	98.8 (0.4)	95.2 (0.9)	87.1 (1.7)	81.1 (3.0)
Testis	94.7 (1.1)	94.0 (1.3)	91.1 (1.8)	88.2 (2.3)
Urinary bladder	82.1 (1.0)	76.2 (1.4)	70.3 (1.9)	67.9 (2.4)
Kidney and renal pelvis	61.8 (1.3)	54.4 (1.6)	49.8 (2.0)	47.3 (2.6)
Brain and other nervous system	32.0 (1.4)	29.2 (1.5)	27.6 (1.6)	26.1 (1.9)
Thyroid	96.0 (0.8)	95.8 (1.2)	94.0 (1.6)	95.4 (2.1)
Hodgkin's disease	85.1 (1.7)	79.8 (2.0)	73.8 (2.4)	67.1 (2.8)
Non-Hodgkin lymphomas	57.8 (1.0)	46.3 (1.2)	38.3 (1.4)	34.3 (1.7)
Multiple myeloma	29.5 (1.6)	12.7 (1.5)	7.0 (1.3)	4.8 (1.5)
Leukaemias	42.5 (1.2)	32.4 (1.3)	29.7 (1.5)	26.2 (1.7)

Rates derived from SEER 1973-98 database (both sexes, all ethnic groups).<sup>12</sup>  
 NOS=not otherwise specified.

**Table 4: Most recent period estimates of relative survival rates, by cancer site**

**Source:** Brenner, H. (2002). Long-term survival rates of cancer patients achieved by the end of the 20th century: a period analysis. *The Lancet*, 360, pp. 1131-1135.

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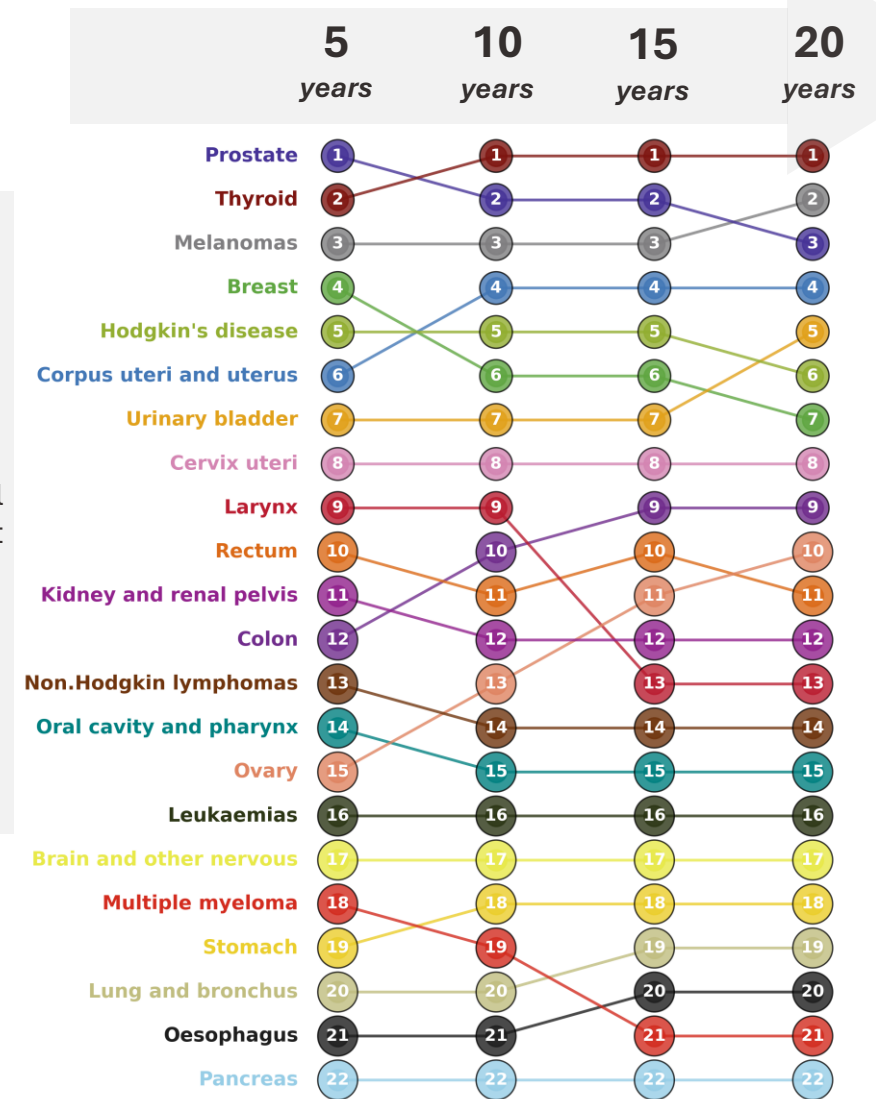
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Source: Brenner, H. (2002). Long-term survival rates of cancer patients achieved by the end of the 20th century: a period analysis. The Lancet, 360, pp. 1131-1135.

## Insights:

- Success stories.** Prostate and thyroid cancers stand out with exceptional survival rates - prostate at 98.8% at 5 years and thyroid at 96%.
- The Pancreatic Challenge.** Pancreas cancer shows devastatingly low survival rates (4% at 5 years, dropping to 2.7% at 20 years), highlighting one of oncology's most urgent challenges.
- Brain Cancers.** Show consistently low survival rates (32% at 5 years), highlighting the challenges of treating central nervous system malignancies.

## From Diagnosis to 20 Years Later: How Cancer Survival Rankings Evolve



Source: Brenner, H. (2002). Long-term survival rates of cancer patients achieved by the end of the 20th century: a period analysis. The Lancet, 360, pp. 1131-1135.

# Present One Big Idea at a Time

## Focus on Insights:

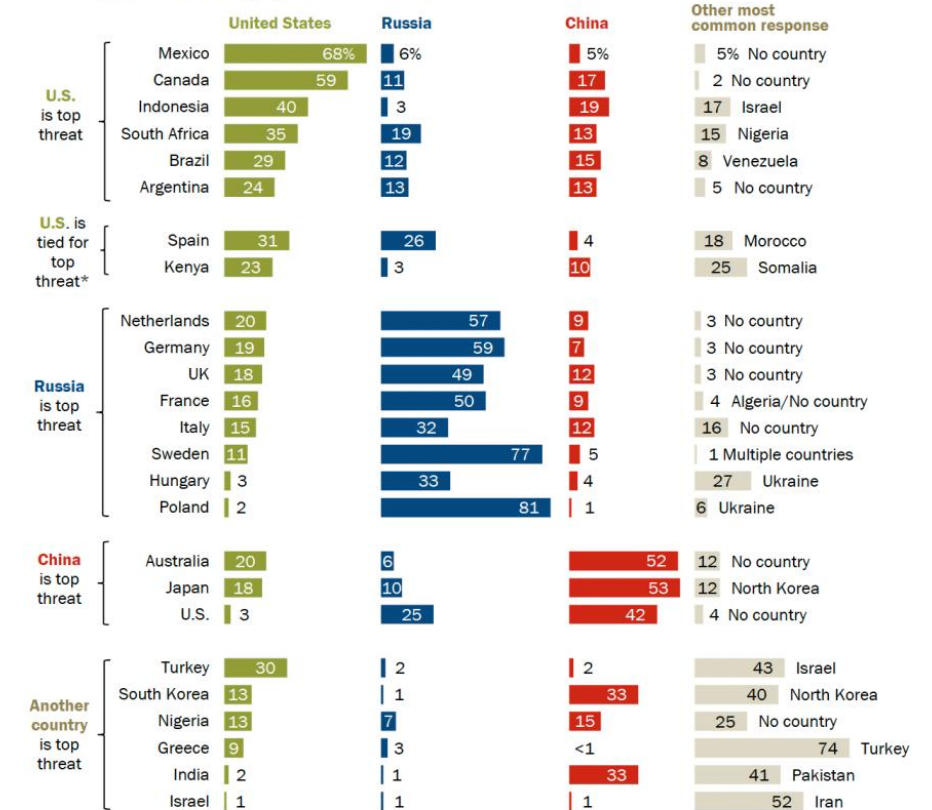
- Every visualization should answer one primary question or make one key point.
- Your goal isn't to show all your data, it's to communicate insights that drive action.

## Strategies include:

- **Use multiple simple charts** instead of one complex chart.
- **Gray out supporting data.** Keep context but don't let it compete for attention.

### U.S., China and Russia are seen as top threats across multiple countries

% who say \_\_\_ is their country's greatest threat



\* In Spain, the difference between the U.S. and Russia is not statistically significant. In Kenya, the difference between the U.S. and Somalia is not statistically significant.

Source: Spring 2025 Global Attitudes Survey.

"People in Many Countries Consider the U.S. an Important Ally; Others See It as a Top Threat"

PEW RESEARCH CENTER

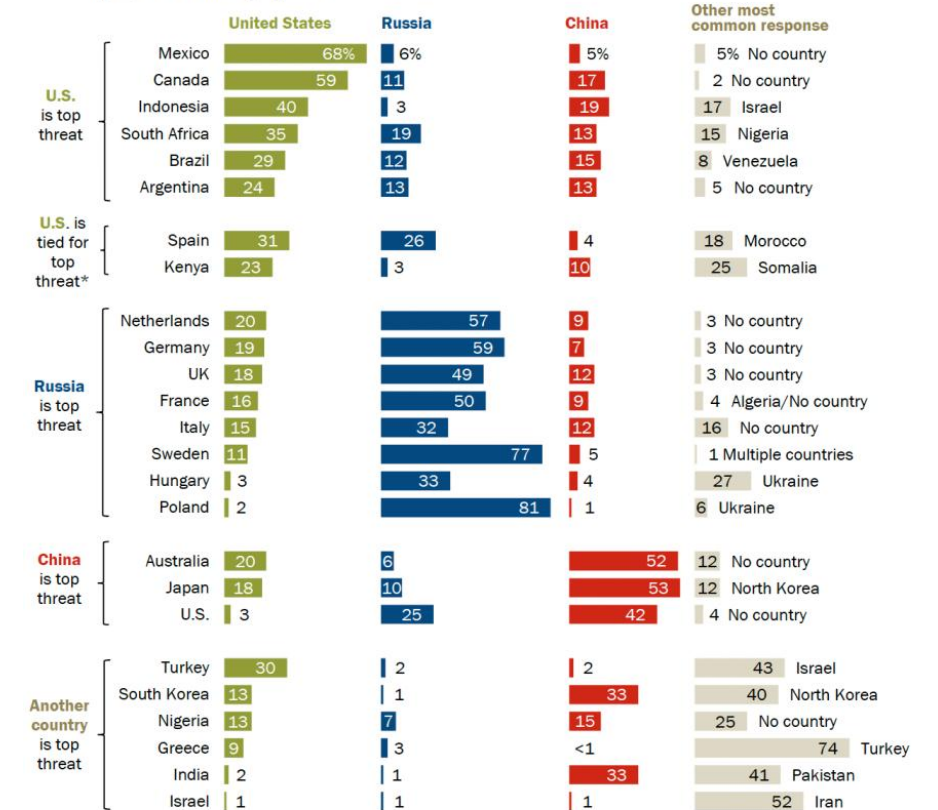
See: [https://www.pewresearch.org/global/2025/07/08/people-in-many-countries-consider-the-u-s-an-important-ally-others-see-it-as-a-top-threat/pg\\_2025-07-08\\_allies-threats\\_0\\_03/](https://www.pewresearch.org/global/2025/07/08/people-in-many-countries-consider-the-u-s-an-important-ally-others-see-it-as-a-top-threat/pg_2025-07-08_allies-threats_0_03/)

# Infographic Re-Design

Let's consider a re-design of this chart by trying to present **one big idea at a time**.

## U.S., China and Russia are seen as top threats across multiple countries

% who say \_\_\_ is their country's greatest threat



\* In Spain, the difference between the U.S. and Russia is not statistically significant. In Kenya, the difference between the U.S. and Somalia is not statistically significant.

Source: Spring 2025 Global Attitudes Survey.

"People in Many Countries Consider the U.S. an Important Ally; Others See It as a Top Threat"

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See: [https://www.pewresearch.org/global/2025/07/08/people-in-many-countries-consider-the-u-s-an-important-ally-others-see-it-as-a-top-threat/pg\\_2025-07-08\\_allies-threats\\_0\\_03/](https://www.pewresearch.org/global/2025/07/08/people-in-many-countries-consider-the-u-s-an-important-ally-others-see-it-as-a-top-threat/pg_2025-07-08_allies-threats_0_03/)

# US, China, Russia seen as top threats across multiple countries

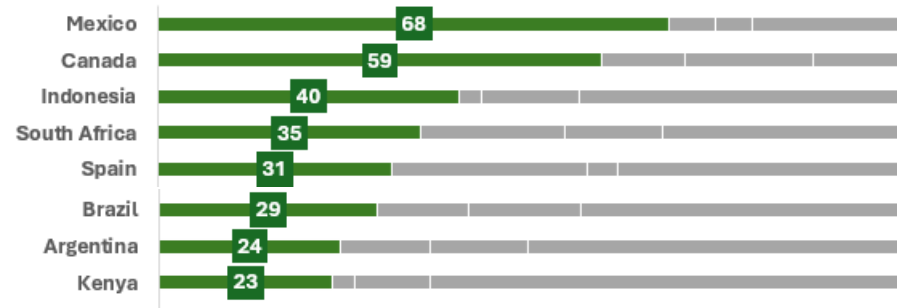
% who say \_\_\_\_\_ is their country's greatest threat.

**Not shown:** Regional rivalries and internal tensions often eclipse global powers in perceived threat assessments. For example, Turkey (74%) is seen as the top threat by its own citizens, reflecting internal divisions. South Korea names Pakistan. Iran, North Korea, and Israel also appear in regional contexts.

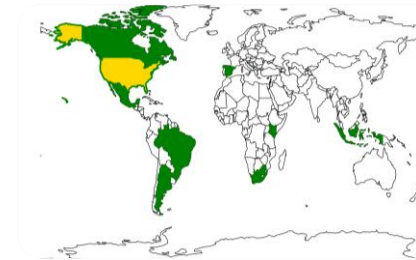
2025 Pew Research Center

## Threats

**United States** is perceived as the greatest threat for **8** countries



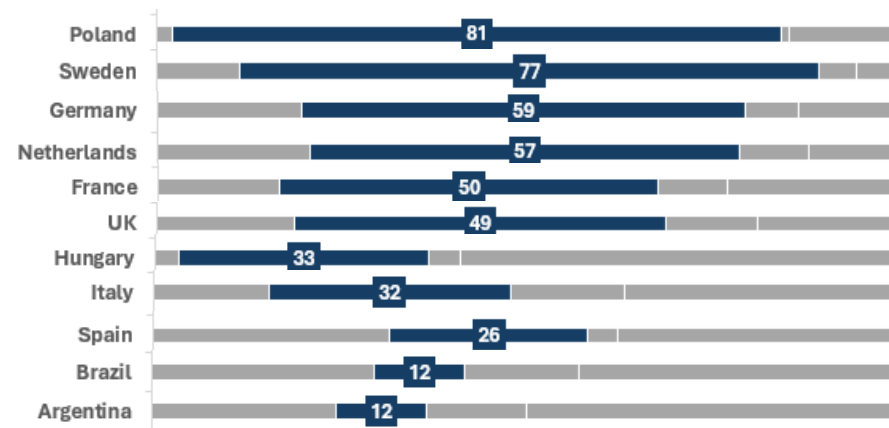
## Patterns



## Insights

The **U.S.** is seen as a threat that spans diverse regions and are not limited to adversaries but includes allies and neutral countries as well.

**Russia** is perceived as the greatest threat for **11** countries



**Russia** is seen as a threat with regional concentration, suggesting influence related to proximity, conflict history, and energy ties.

**China** is perceived as the greatest threat for **3** countries



**China** is seen as a strategic rival in both the Indo-Pacific and the U.S., aligning with tensions over trade, military buildup, and regional influence.

# Data Visualization Checklist

## Data Visualization Checklist

by Stephanie Evergreen & Ann K. Emery

This checklist is meant to be used as a guide for the development of high impact data visualizations. Rate each aspect of the data visualization by circling the most appropriate number, where 2 points means the guideline was fully met, 1 means it was partially met, and 0 means it was not met at all. n/a should not be used frequently, but reserved for when the guideline truly does not apply. For example, a pie chart has no axes lines or tick marks to rate. If the guideline has been broken intentionally to make a point, rate it n/a and deduct those points from the total possible. Refer to the Data Visualization Anatomy Chart on the last page for guidance on vocabulary and the Resources at the end for more details.

Text	Guideline	Rating
Graphs don't contain much text, so existing text must encapsulate your message and pack a punch.	<b>6-12 word descriptive title is left-justified in upper left corner</b> Short titles enable readers to comprehend takeaway messages even while quickly skimming the graph. Rather than a generic phrase, use a descriptive sentence that encapsulates the graph's finding or "so what?" Western cultures start reading in the upper left, so locate the title there.	2 1 0 n/a
	<b>Subtitle and/or annotations provide additional information</b> Subtitles and annotations (call-out text within the graph) can add explanatory and interpretive power to a graph. Use them to answer questions a viewer might have or to highlight specific data points.	2 1 0 n/a
	<b>Text size is hierarchical and readable</b> Titles are in a larger size than subtitles or annotations, which are larger than labels, which are larger than axis labels, which are larger than source information. The smallest text - axis labels - are at least 9 point font size on paper, at least 20 on screen.	2 1 0 n/a
	<b>Text is horizontal</b> Titles, subtitles, annotations, and data labels are horizontal (not vertical or diagonal). Line labels and axis labels can deviate from this rule and still receive full points. Consider switching graph orientation (e.g., from column to bar chart) to make text horizontal.	2 1 0 n/a
	<b>Data are labeled directly</b> Position data labels near the data rather than in a separate legend (e.g., on top of or next to bars and next to lines). Eliminate/embed legends when possible because eye movement back and forth between the legend and the data can interrupt the brain's attempts to interpret the graph.	2 1 0 n/a
	<b>Labels are used sparingly</b> Focus attention by removing the redundancy. For example, in line charts, label every other year on an axis. Do not add numeric labels "and" use a y-axis scale, since this is redundant.	2 1 0 n/a



**Source:** Evergreen, Stephanie, Data Visualization Checklist. Available at: <https://stephanieevergreen.com/wp-content/uploads/2020/12/EvergreenDataVizChecklist.pdf>

“

Anything that can go wrong  
will go wrong.

Murphy's Law

”

# When Things Go Wrong

Preparing for and recovering from technical failures  
during presentations

# When Tech Betrays You

A librarian was scheduled to give her signature “Advanced Bibliometrics” workshop to a group of 20 faculty members. She had rehearsed three times, tested all her links, and felt completely prepared.

But when she arrived, she discovered that the conference room had outdated technology. The only way to project her screen was by using the podium computer—there was no room for her laptop, and no dual-screen capability to view her speaker notes.

Trying to stay composed, she moved forward without her notes. But when she launched the first database, she hit another roadblock: it required a login, and her credentials (normally auto-filled by her password manager) weren’t saved on the podium computer. None of her bookmarks, saved searches, or carefully prepared examples were accessible.



# When Tech Betrays You

She pivoted to a freely available backup database, only to be met with a bright red error message: “Database temporarily unavailable for maintenance.”

Now clearly flustered, she opened Google Scholar in a last-ditch effort to demonstrate citation metrics. But without her planned search terms or filters, she couldn’t replicate the elegant, precise results she had practiced. Instead, she fumbled through 47,000 irrelevant hits for “climate change,” narrating as participants watched her scroll helplessly through generic results.

She spent the final 10 minutes trying to recreate the session from memory on an unfamiliar computer. The session ended awkwardly. Participants left visibly disappointed, and the host quietly commented, “We’ll try the library again sometime.”



# When Tech Betrays You

## What happened?

She tested everything perfectly ... but Murphy's Law strikes during showtime

### ● **Blue Group, type your responses into chat:**

What's in your personal tech emergency kit when teaching?

### ● **Purple Group, you may be called on to:**

Summarize one of the responses made by a member of the Blue Group



# When Tech Betrays You

You've tested everything perfectly ... but Murphy's Law strikes during showtime

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## Backup Strategies

- Consider becoming familiar with a primary database + 2 alternatives
- Prepare slides with screenshots of key databases or search results
- Downloaded PDFs of example articles, as needed
- Have user-names and passwords available

# When Tech Betrays You

You've tested everything perfectly ... but Murphy's Law strikes during showtime

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## When Things Break

- **Acknowledge quickly:** "Looks like the database is having a moment"
- **Set a time limit:** "I'll try for 2 minutes, then we'll pivot"
- **Stay calm and narrate:** "This actually happens a lot in real life"
- **Reschedule if reasonable:** "Since this is best learned by doing, let's reschedule"

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## No-Tech Alternatives

- **Case study discussions:** "Let's troubleshoot Maria's actual research question."
- **Strategy brainstorming:** "What would you do if PubMed was down?"
- **Q&A deep dive:** "Let's tackle your real research challenges."



A journey of a thousand miles  
begins with a single step.

Lao Tzu



# Start Small, Build Momentum

Action items and resources to continue improving  
your presentation skills

# Action Items



## This Week:

- Choose ONE design principle to focus on in your next presentation
- Create a simple backup plan for your most-used databases/tools
- Practice your opening 2 minutes out loud



## Next Month:

- Try one new engagement technique (polls, chatterfall, or pulse checks)
- Redesign 3-5 slides using the "less is more" approach
- Test your presentation tech setup in advance



## Ongoing:

- Apply the "So What?" test to every slide you create
- Start each presentation by understanding your audience's needs first
- Build your personal library of go-to engagement activities

# Tools and Resources

## **Books & Guides**

- "Resonate" by Nancy Duarte - Audience-focused presentation structure
- TED Masterclass - Chris Anderson's "The Official TED Guide to Public Speaking"

## **Practice & Feedback**

- Toastmasters International - Local clubs for regular practice and feedback
- Pecha Kucha - 20x20 format (20 slides, 20 seconds each)

## **Design & Visual Resources**

- Stephanie Evergreen's Blog ([stephanieevergreen.com](http://stephanieevergreen.com)) - Data visualization excellence
- Presentation Zen Blog - Design philosophy and examples

# Share! Upload Presentations to a Repository



**DRYAD**



figshare



OSF



MENDELEY DATA



Vivli

zenodo

- Creates a permanent link (DOI) for your posters and presentations to reference in your CV, ORCID record, or other online networking profile.
- Content is findable by search engines such as Google.

*Note: The content is a permanent deposit into the repository. All authors listed on poster or presentation should provided their approval.*

Questions and Comments

Thank you

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