KILLAM TEACHING TALK

ACTIVE LEARNING IN LARGE CLASSES

21 August 2025: Arts ISIT Welcome Back Conference

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INTRO TO PSYCH 101 / 102
DR. SIMON LOLLIOT

CONTEXT

- Large, intro classes (300+)
- Challenges to do a number of active learning activities
- Opens up the possibility to demonstrate psychological phenomena via in-class experiments
- Present 4 demonstrations that I run live, in class

Over the past two decades, I have taught subjects from music theory to advanced statistics for the social sciences to diverse groups of students, from 10-year-olds to tenured professors. My pedagogical training and my varied teaching experiences have shaped my approach to teaching. My overarching goal is to equip students with transferable skills to navigate complex problems in an ever-changing global society. To achieve this, I focus on three core principles: (1) teaching students to think critically, (2) fostering curiosity, and (3) teaching for understanding. Additionally, I view reflection on my teaching practices as essential for personal and professional growth.

Critical Thinking: The ability to think critically is vital in a world increasingly influenced by misinformation and the replication crisis in psychology. Critical thinking begins with asking the right questions (King, 1995), yet students often default to factual inquiries rather than analytical ones (Dillon, 1998). To address this, I have designed assignments that teach students to craft thoughtful, critical questions and require them to answer those questions. This practice helps students develop analytical skills that they can apply across disciplines, fostering deeper engagement with course material and preparing them for real-world challenges.

Curiosity is a cornerstone of learning and has been shown to predict academic performance over-and-above intelligence and conscientiousness (von Stumm, Hell, & Chamorro-Premuzic, 2011). Curiosity transforms learning into a quest for understanding rather than a mere collection of facts. This intrinsic motivation fosters resilience and persistence when faced with challenges. Research shows that individuals with strong internal motivation often outperform those with higher intelligence (Duckworth et al., 2007). While the Socratic paradox, summarized by Einstein as “The more I learn, the more I realize how much I don’t know”, may initially seem daunting, curiosity turns this awareness into a powerful source of inspiration for lifelong learning.

Teaching for Understanding: True learning requires students to integrate new concepts into their existing knowledge structures rather than relying on rote memorization. Teaching for understanding enhances retention and enables students to apply knowledge to new contexts (Hilgard, Irvine, & Whipple, 1953). To facilitate this, I incorporate experiential learning into my classes by way of in-class experiments that demonstrate psychological phenomena, thus connecting students’ experiences during these activities to key learning outcomes. By directly engaging with the material, students come to see psychology not as an abstract subject but as something lived and experienced.

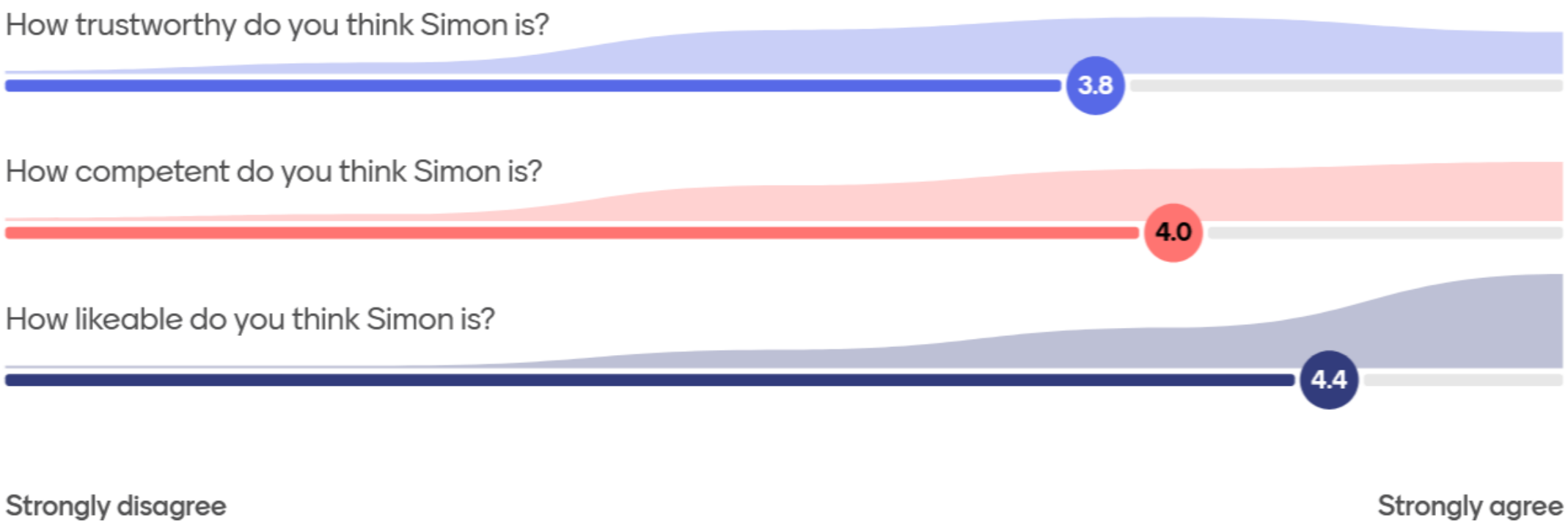
THESE IN-CLASS EXPERIMENTS COVER 80% OF MY TEACHING PHILOSOPHY

OVERVIEW OF TODAY

- Class Exercise #1: Getting Students Comfortable and Interested
- Class Exercise #2: The Psychology of Computers in the Classroom
- Class Exercise #3: Memory
- Class Exercise #4: Universality of Emotions

CAN SOMEONE COUNT 7 SECONDS PLEASE

Please rate Simon on the following dimensions



Forbes LOG IN

Seven Seconds to Make a First Impression

Carol Kinsey Goman, CONTRIBUTOR
FULL BIO

Opinions expressed by Forbes Contributors are their own.

PSYCHOLOGICAL SCIENCE

Research Article

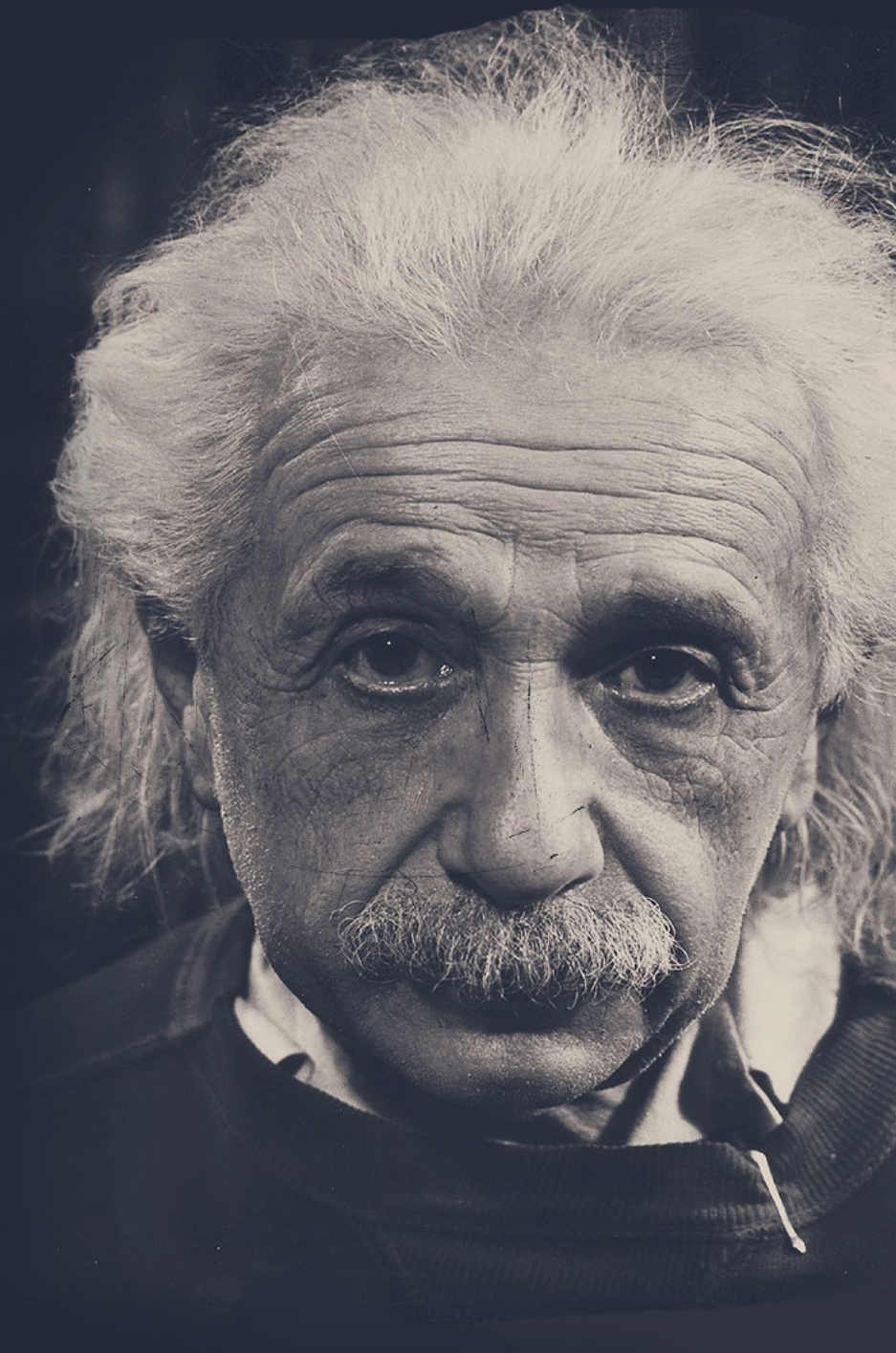
First Impressions

Making Up Your Mind After a 100-Ms Exposure to a Face

Janine Willis and Alexander Todorov

Princeton University

Education is not learning of facts, but the training of the mind to think



PSYCHOLOGY IS EVERYWHERE

WHAT ELSE IS EVERYWHERE?

LAPTOP USE IN CLASSROOM

ELSEVIER

Available online at www.sciencedirect.com

ScienceDirect

Computers & Education xxx (2007) xxx–xxx

COMPUTERS & EDUCATION

www.elsevier.com/locate/compedu

In-class laptop use and its effects on student learning

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Received 29 June 2006; received in revised form 15 September 2006; accepted 24 September 2006

- Laptop use in lectures was associated with

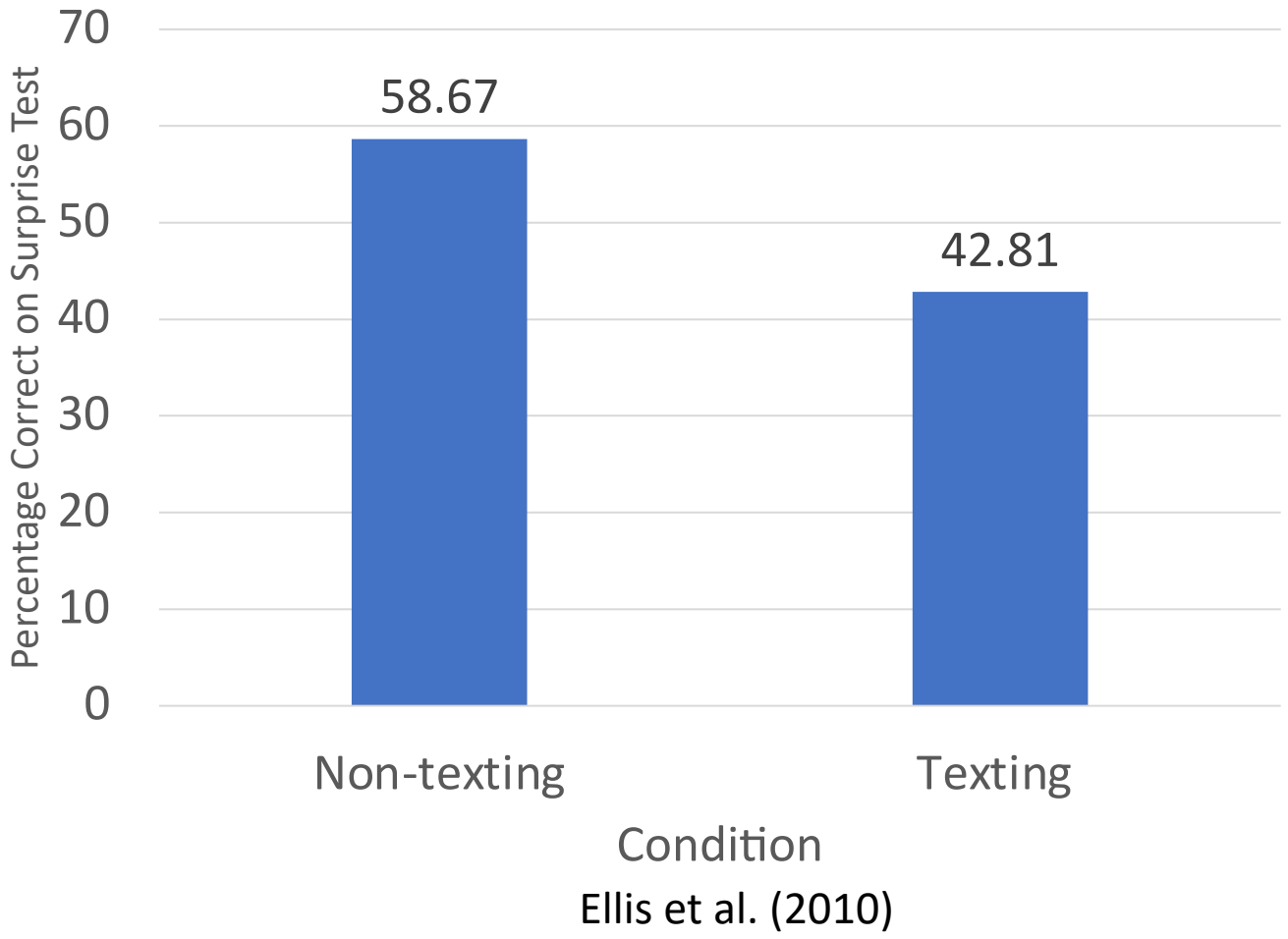
- paid less attention (*r* = -.32)

- how clear students found lecture (*r* = -.17)

- how well understood material (*r* = -.19)

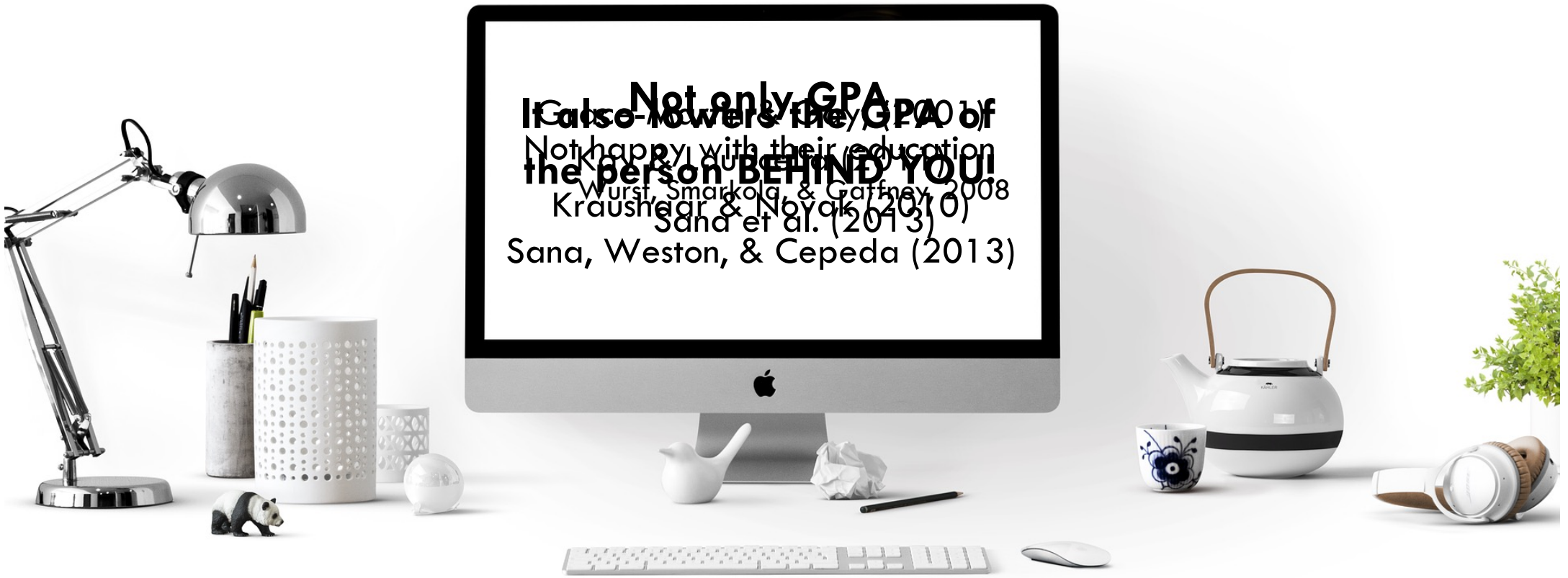
- worse performance in class (*r* = ~-.18)

CELLPHONE USE IN CLASSROOM



Ellis et al. (2010)

TECHNOLOGY IN THE CLASSROOM



BAD THINGS WON'T HAPPEN TO ME

How better to convince than to demonstrate that you can't (or shouldn't) do two things at once…

WHY IS TECHNOLOGY BAD?

- Pair up – one of you will do the task, the other will time you.
  - One of you will need a piece of paper and the other, a timing device

- Draw two lines.

- Time how long it takes to first write “I am a great multitasker” and on the second line, numbers sequentially from 1 through 20.

INSTRUCTIONS

I am a great multitasker

---

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Time how long it takes to complete
the following task

WHY IS TECHNOLOGY BAD?

- Pair up – one of you will do the task, the other will time you.
  - One of you will need a piece of paper and the other, a timing device

- Draw two lines.

- Time how long it takes to first write “I am a great multitasker” and on the second line, numbers sequentially from 1 through 20.

- Now, draw two new lines - time yourself again, but this time switch between tasks (e.g., Write “I” then “1”, then “a” then “2”

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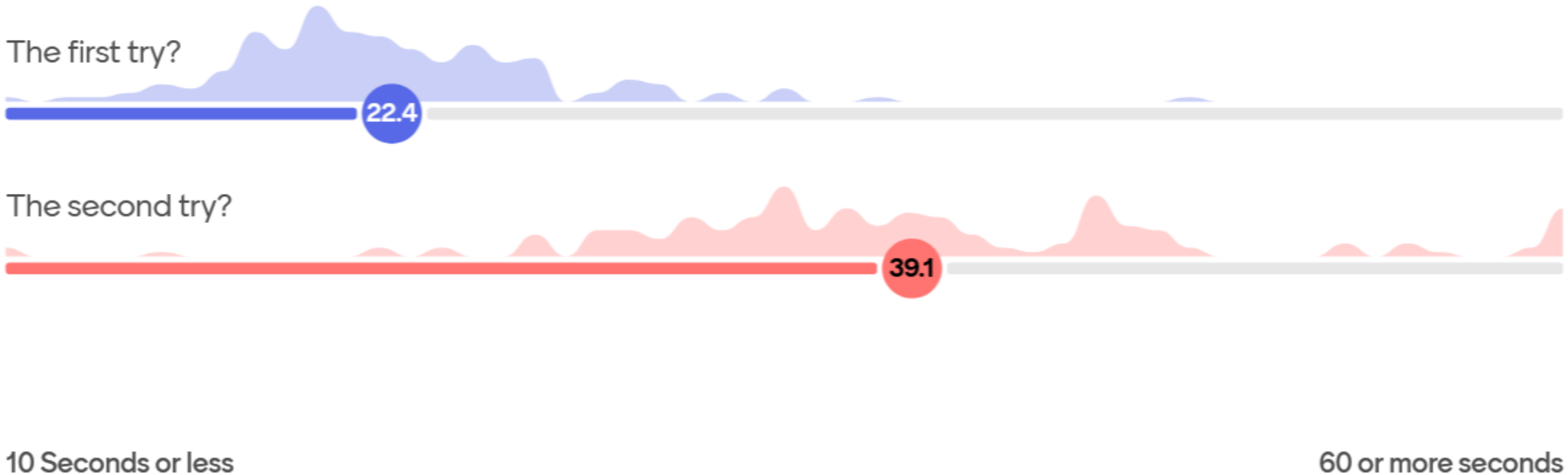
How long did it take you



TECHNOLOGY IN THE CLASSROOM

We suck at multitasking…

(Broadbent, 1958, Pashler, 1994; Posner, 1982; Wickens & Hollands, 2000)

Not even at tasks that we are good at

(Hyman et al., 2009)

Slows the speed at which the brain processes information and increases cognitive load

(Waskom et al., 2014)

Habitual multi-tasking slows down processing *even when performing a focused task*

(Ophir, Nass, & Wagner, 2009)

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- Class Exercise #4: Universality of Emotions

4

MISATTRIBUTION

DISTORTION

You have a memory…

Assign (attribute) it to the wrong source

Example: Simon and coffee

4 MISATTRIBUTION

DISTORTION

4

MISATTRIBUTION

DISTORTION

You have a memory…

Assign (attribute) it to the wrong source

Most common mistake in eyewitness misidentifications

GARRETT (2011)
Reviewed 250 wrongful convictions
>75% were made in part on eyewitness testimony

4

MISATTRIBUTION

Read each word for about 1 second

I will forward the slide after 30 seconds

CLASS EXERCISE

Sour
Candy
Sugar
Butter
Good
Taste
Tooth
Nice
Honey
Soda

Chocolate
Heart
Cake
Tart
Pie
Thread
Pin
Eye
Sewing
Sharp

Point
Prick
Thimble
Haystack
Pain
Hurt
Injection
Syringe
Cloth
Knitting

CLASS EXERCISE

Sour
Candy
Sugar
Butter
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Taste
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Honey
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Thread
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Point
Prick
Thimble
Haystack
Pain
Hurt
Injection
Syringe
Cloth
Knitting

CLASS EXERCISE

WERE ON THE LIST

WERE NOT ON THE LIST

taste

bread

needle

king

sweet

thread

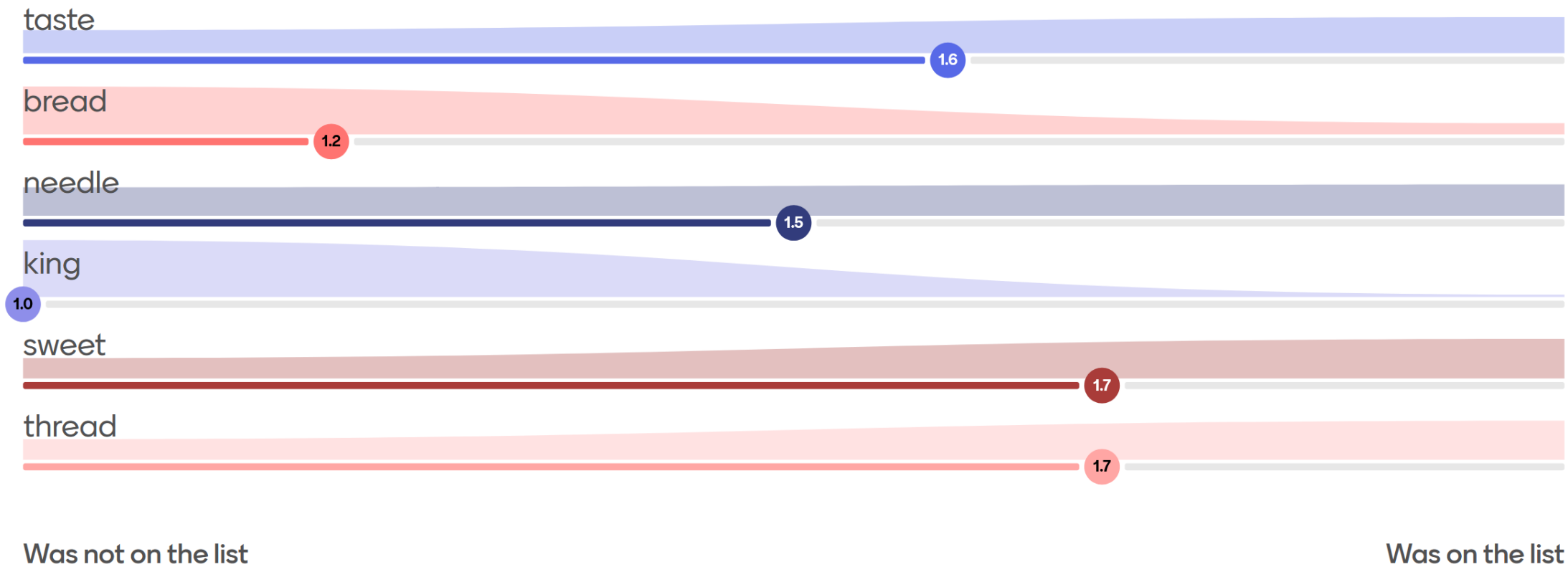
CLASS EXERCISE

Sour
Candy
Sugar
Butter
Good
Taste
Tooth
Nice
Honey
Soda

Chocolate
Heart
Cake
Tart
Pie
Thread
Pin
Eye
Sewing
Sharp

Point
Prick
Thimble
Haystack
Pain
Hurt
Injection
Syringe
Cloth
Knitting

Were the following words on the list or not on the list?



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EMOTIONS

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MENTI.COM: 3100 6296

EMOTIONS ARE UNIVERSAL

Happiness

Surprise

Sadness

Fright

Disgust

Contempt

Anger

WHAT EMOTION IS THIS?

WHAT EMOTION IS THIS?

FEDDERER WON MATCH

- 78 / 81 = happiness / pride / excitement

FEDDERER LOST MATCH

- 60 / 69 = sad

SUMMARY

- Psychology courses are hard
- Seen as a lot of rote memorization
- I find that by demonstrating phenomena in large classes, creates a personalized experience with the content on which students can draw
- Also seeing the phenomenon unfold helps develop an understanding for complex psychological phenomena