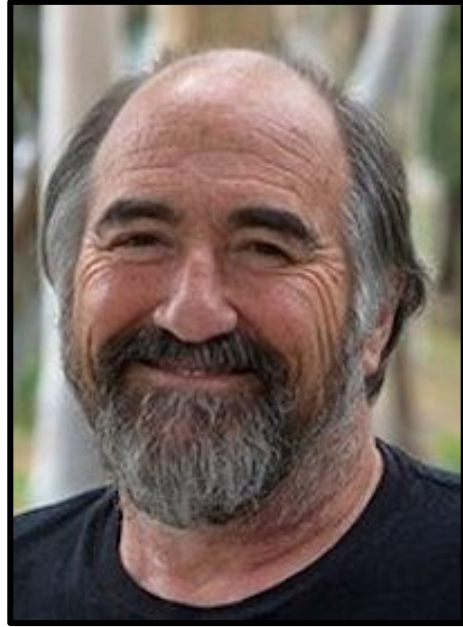


PROVIDING YOUR CHILD (AND YOU) WITH STRATEGIES TO IMPROVE FOCUS



Solana Beach School District Parents

Dr. Larry D. Rosen

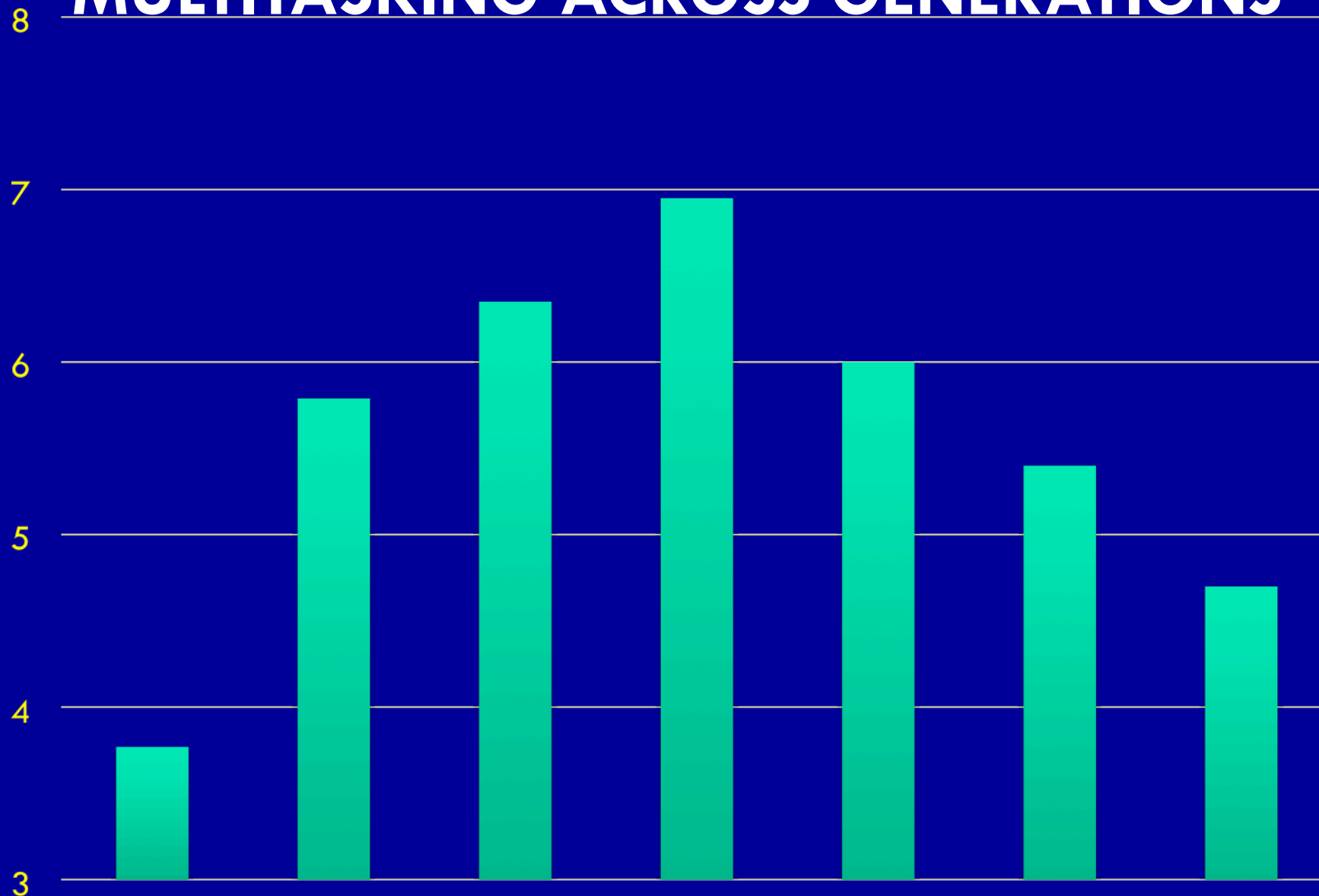
Professor Emeritus of Psychology

April 1, 2021

WE LIVE IN A WORLD OF MULTITASKING MADNESS



MULTITASKING ACROSS GENERATIONS



GENERATION C
4-8

iGENERATION
13-15

NET GEN

GEN X

BABY BOOMERS

INTERNAL VS. EXTERNAL DISTRACTORS

- External distractors include environmental sights, sounds, etc. plus technology-generated beeps, buzzes, vibrations, visuals, fancy icons, etc.
- Internal distractors come from inside the brain from mind wandering, boredom, feeling the “need” to do something else, etc.

IS IT REALLY MULTITASKING OR IS IT “CONTINUOUS PARTIAL ATTENTION” OR “TASK SWITCHING”?

- Humans can only multitask if one task is automatic or requires little cognitive effort
- We are often engaged in one task but scanning for others (smartphone/Internet/TV/other screens)
- Switching may be related to FOMO: “Fear of Missing Out”
- Release of stress hormones (norepinephrine, cortisol)
- Blocks calming “happiness” hormones (dopamine, serotonin)



THREE POSSIBLE EFFECTS ON CHILDREN

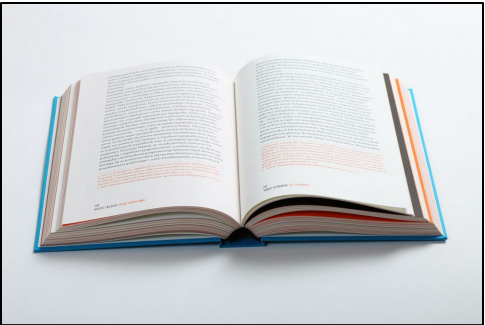
- Screen consumption could contribute to a lack of social skills (Small, 2010)
- Screen use contributes to shallow thinking (Carr, 2010)
- Electronic media consumption can alter development of stage-sensitive brain pathways (Healy, 1998)

WHY DO THEY DO IT?

- Human Orienting Response
 - ✓ Instinctive biological reaction to sudden and novel stimuli
 - ✓ Dilation of blood vessels to the brain
 - ✓ Heightened mental arousal
- Attention-grabbing ploys by media/tech developers
 - ✓ TV: Loud noises, sudden camera shifts, violent content
 - ✓ ALL SCREENS: Attention Merchants make you act

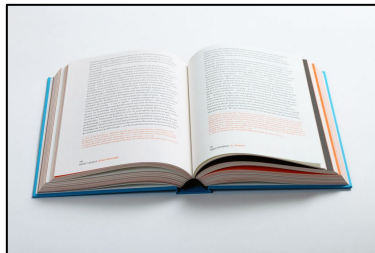
COSTS OF MULTITASKING

- Attention Difficulties
- Poor Decision Making
- Breadth vs. Depth of Material
- Information Overload
- Screen Addiction/Obsession
- Poor Sleep Habits



LAURA BOWMAN'S STUDY

CONTROL GROUP



Read

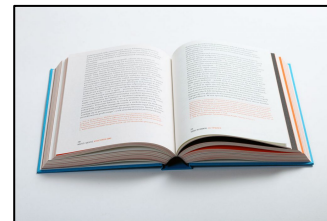


Take Test

INTERRUPTION GROUP 1



IM

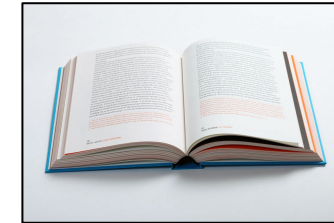


Read

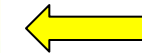


Take Test

INTERRUPTION GROUP 2



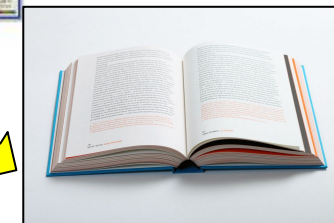
Read



SEVERAL IM INTERRUPTIONS



IM



Continue to Read



Take Test

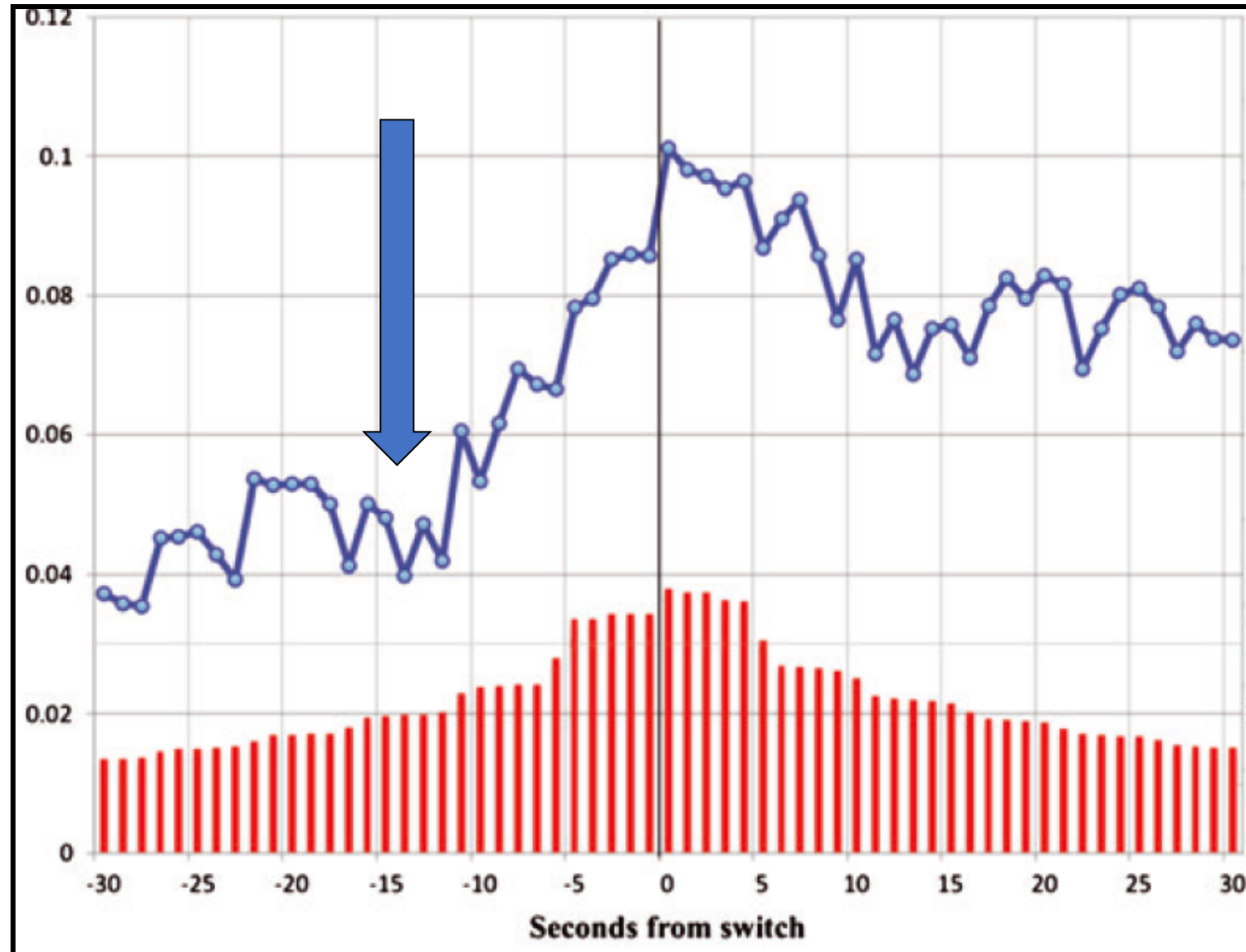
- Who Took Longer to Finish the Chapter and the Test?
- Who Performed Better on the Test?
- Who Had More Stress?

ANOTHER INTERESTING STUDY ABOUT ATTENTION

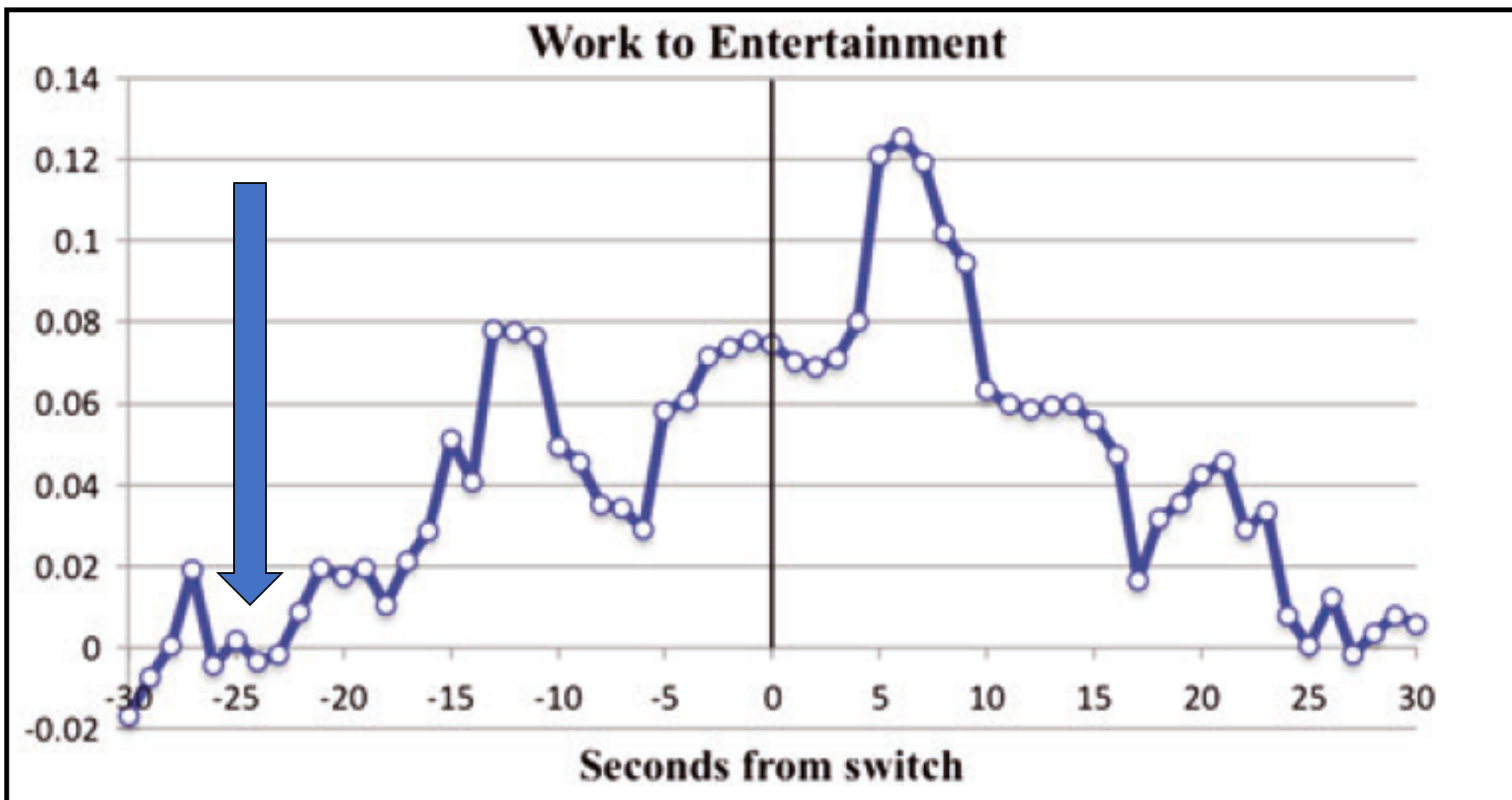
Stanford University Study (Yeykelis et al., 2014)

- Very small study but interesting
- Watched SCREEN switches on computer
- Also measured “arousal”

WHAT HAPPENED TO AROUSAL LEVELS?



ONLY SWITCHES FROM WORK TO “ENTERTAINMENT” (FACEBOOK, VIDEOS AND GAMES)



MARSHMALLOW STUDY

- Late 1960s-early 1970s
- 600 4-to-6-year-olds
- 33% delay gratification
- Long term effects
 - ✓ Higher SAT scores
 - ✓ Higher educational attainment
 - ✓ Lower BMI
 - ✓ 50 years later – more active Prefrontal Cortex and less active in addiction area

HOW LONG DO YOUNG PEOPLE (AND ADULTS) STAY ON TASK?

ACROSS MANY STUDIES
THE AVERAGE TIME ON
TASK BEFORE BEING
DISTRACTED IS 3 – 6
MINUTES



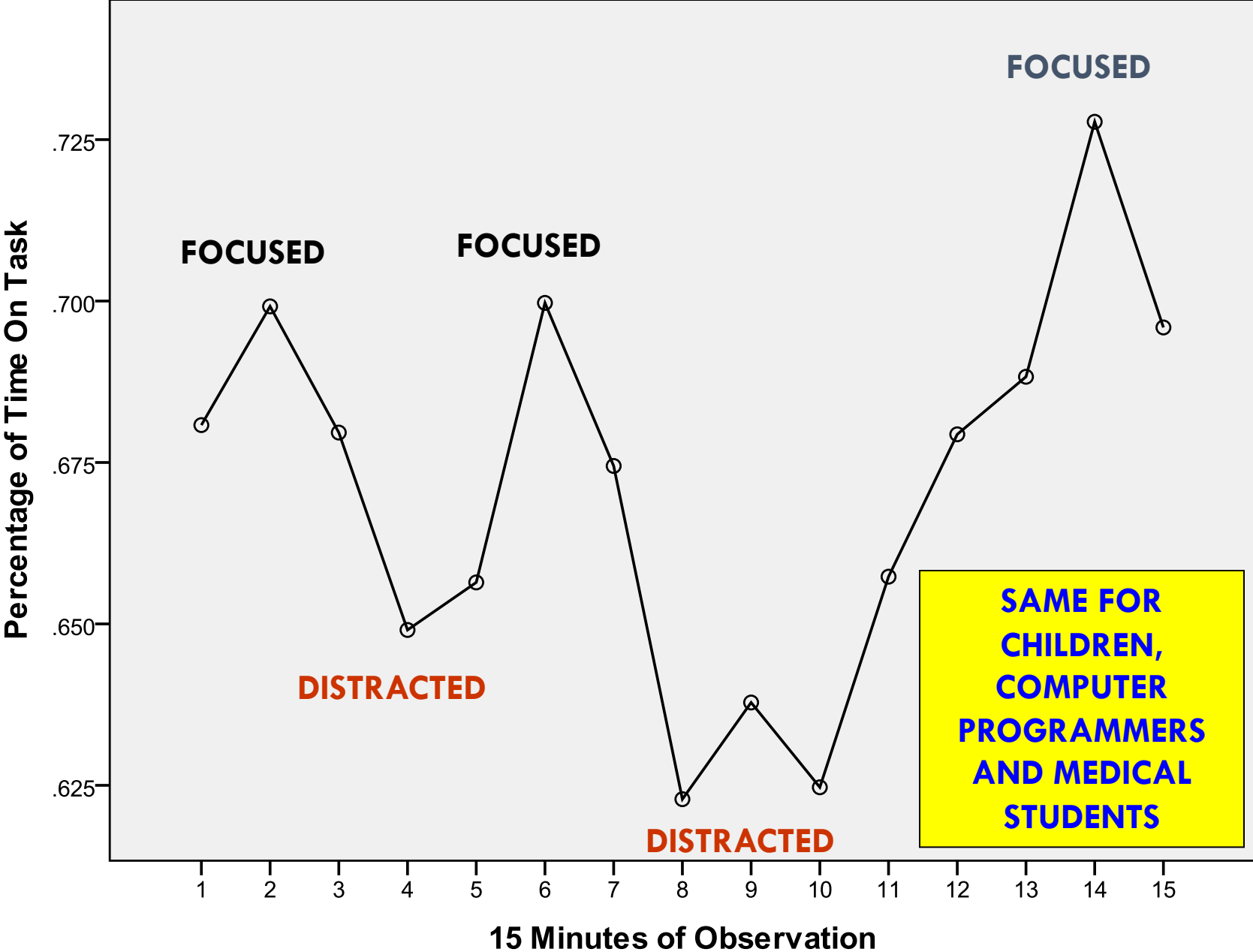
MOST COMMON
DISTRACTORS?
COMMUNICATION
TECHNOLOGY

OUR “STUDY OF STUDYING”

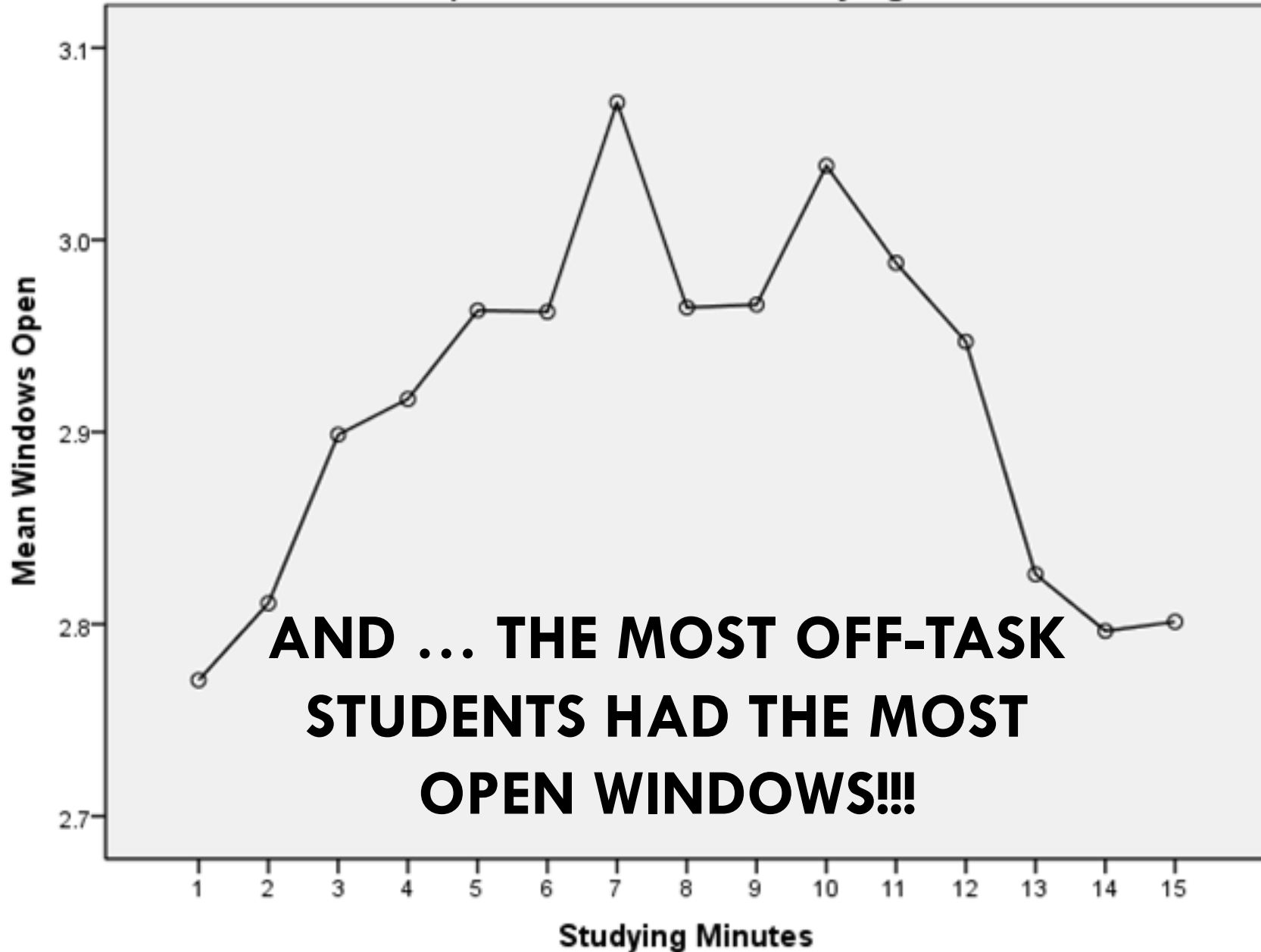
A CASE OF DISTRACTED LEARNERS

- 279 students observed studying [middle school, high school, college]
 - ✓ NOTE: All age groups performed the same!
- 15 minutes – observe every minute
 - On-task or off-task?
 - What is on computer screen?
 - Daily use of technologies and media
 - Studying strategies?
 - Preference for task switching
- School performance (GPA)

On Task Percentage Over Time for 15 Minutes Studying Across All Grade Levels



Windows Open Over 15 Minute Studying Time



WHAT PREDICTED SCHOOL PERFORMANCE (GPA)?

POSITIVES

How much they stay “on task”

If they have strategies for studying

NEGATIVES

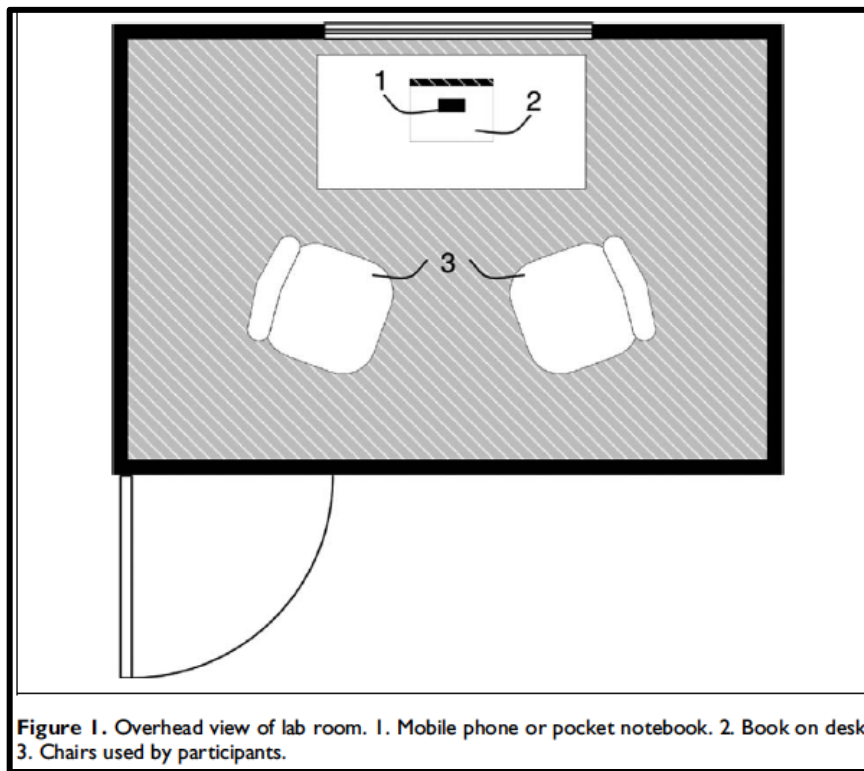
Preference for task switching

Daily media consumption

Whether they checked Social Media ONCE during
15 minutes

THE MERE PRESENCE OF A PHONE IS DISTRACTING

Phone or Small Book on
the Table



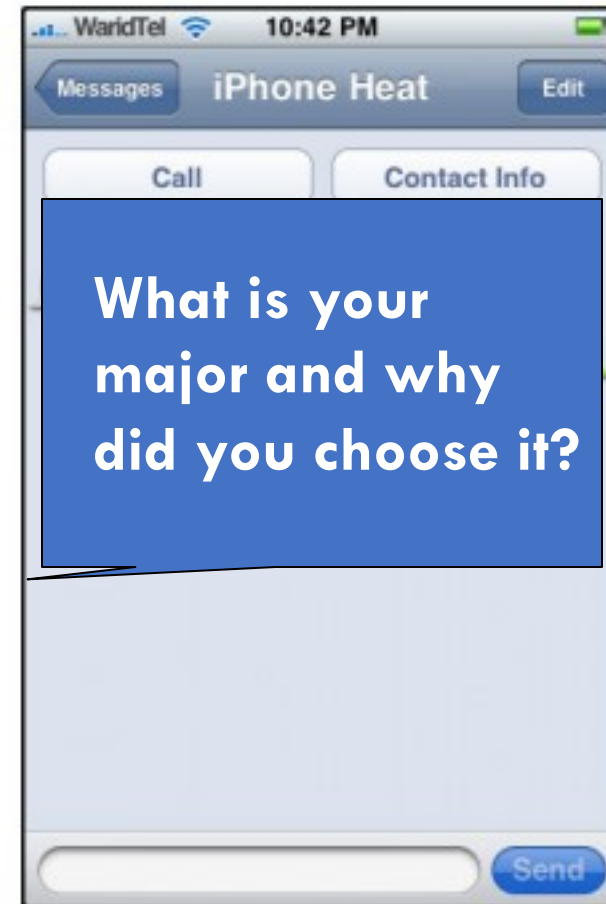
- “iPhone Effect”: If Conversing with Someone with ANY phone nearby:
 - ✓ You Rate That Person **Less Trustworthy**
 - ✓ And Feel **Less Empathy** for Person
- If Phone Ringing/Beeping in the Background:
 - ✓ **Retain Less** Of Material Being Studied
 - ✓ Get **More Stressed**
- If Studying With Phone Around (not ringing):
 - ✓ **Perform Worse** On Difficult Tasks
 - ✓ No Impact On Easy Tasks

METACOGNITION?

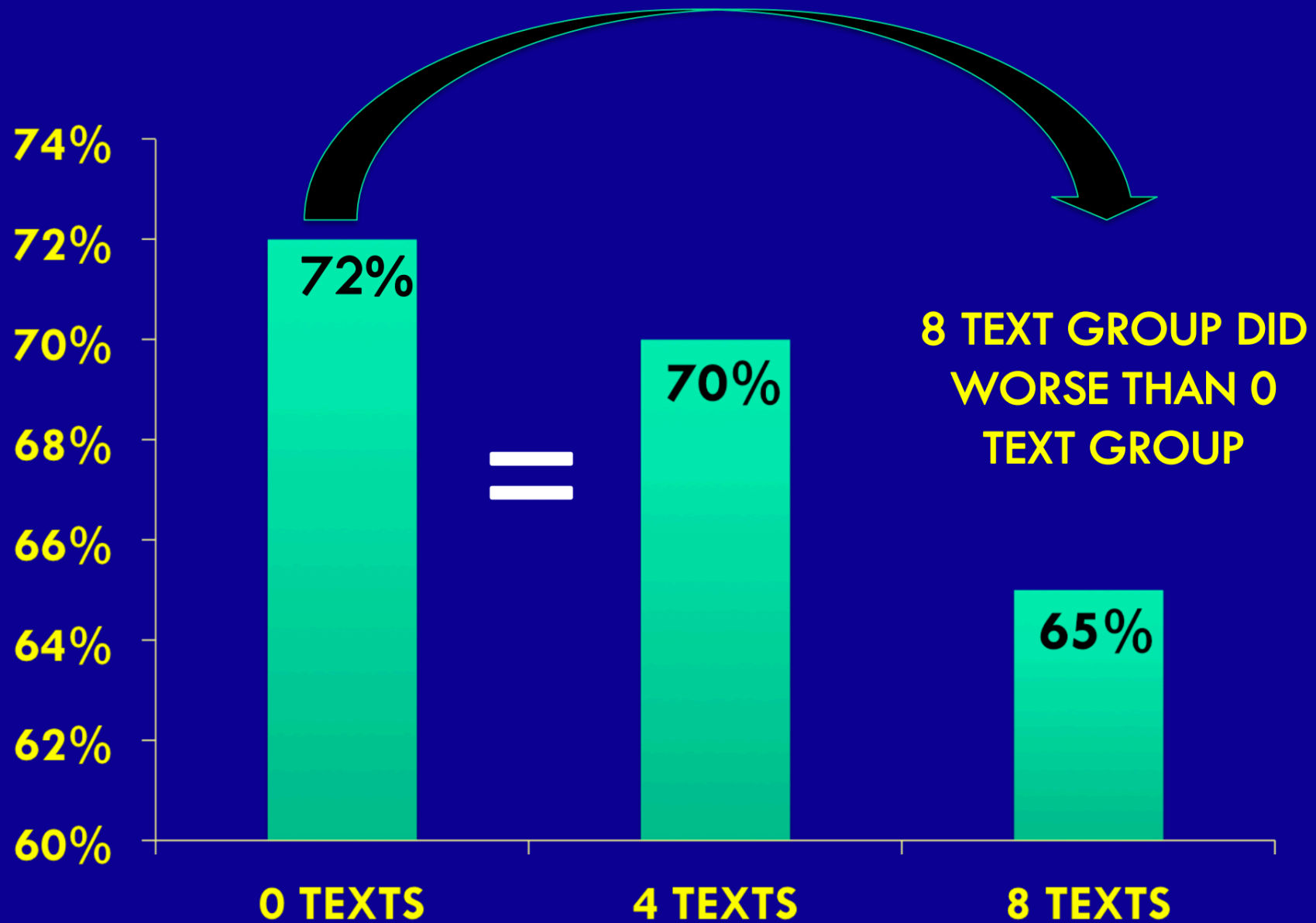
- Means “thinking about thinking”
 - ✓ Emphasizes the role of executive processes (attention, working memory, multitasking, impulsivity, etc.) in the overseeing and regulation of cognitive processes
- Has many components, including:
 - ✓ Self-judgments of learning abilities with or without distractions
 - ✓ Knowledge of one’s own learning styles
 - ✓ Self-estimated knowledge and skill levels

OUR STUDY: METACOGNITION IN ACTION

- 4 university classes;
n=175
- 30 minutes video
lecture
- Interruptions: no
texts, 4 texts, 8
texts



IMPACT OF INTERRUPTIONS



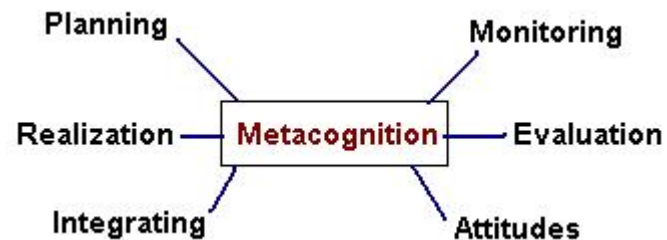
DID ANYONE SHOW “METACOGNITION”?

- Those who IMMEDIATELY read and/or responded to a text message got a “C”
- Those who waited for a few minutes to read or respond got an “A”!

STRATEGIES FOR SAVING YOUR HUMANWARE

Meta Cognition

Knowing When to Focus and When to Switch



Resetting Your Brain

Modern Day Coffee Break



“DIGITAL” TIME MANAGEMENT

- Metacognition could be applied to time management while using or being influenced by screens
- Examples:
 - ✓ Noticing one's anxiety caused by separation from screens (nomophobia)
 - ✓ Knowing when to stop using unneeded screens in class (or during a meeting)
 - ✓ Knowing when to put away or look away from screens during schoolwork (or at work)

POSSIBLE METACOGNITIVE QUESTIONS FOR STUDENTS OF ALL AGES (AND ADULTS, TOO!)

NOTE: Substitute “work” for “study” to apply to adults in the workplace.

- The best place for me to study is _____ because _____.
- Some ways that I can avoid distractions while studying are _____.
- A good place for me to put my screens before studying is _____.
- Some ways that I can use screens for school but not be distracted are _____.

TECH BREAKS TO INCREASE FOCUS AND ATTENTION

STEP 1: Set a timer for 1 minute to check in with any app, website, etc. that you DO NOT NEED for your work. When the timer rings you are ready to start to pay attention to work.

STEP 2: Now silence your phone, set timer for 15 minutes, and place phone face down within your sight.

STEP 3: When timer rings, set it for 1 minute again and look at whatever you want among the apps, sites not needed for current work.

STEP 4: Again, set the timer for 15 minutes and repeat.

STEP 5: When the 15-minute alarm rings and you do not immediately stop working you can increase to 20, 25, 30 minutes.

RESETTING THE BRAIN

- THINK coffee break or cigarette break
 - ✓ Improved performance from the break
- Preteen, teen & adult behaviors
 - ✓ Bored – used to task switching
 - ✓ Communication beckons
 - ✓ Short attention span (remember 3-5 minutes!)



RESETTING YOUR BRAIN (every 60-90 minutes)

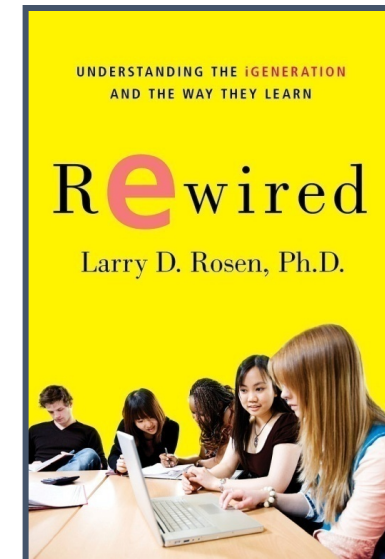
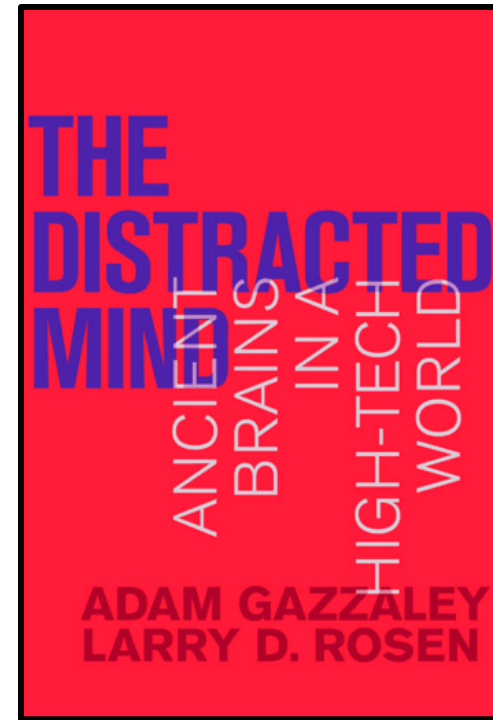
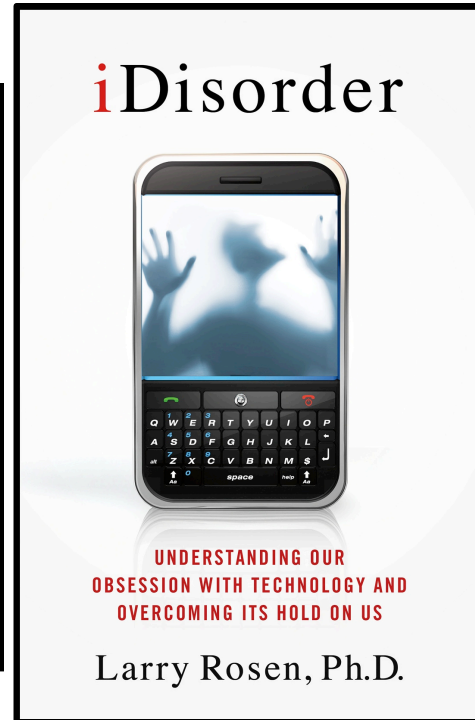
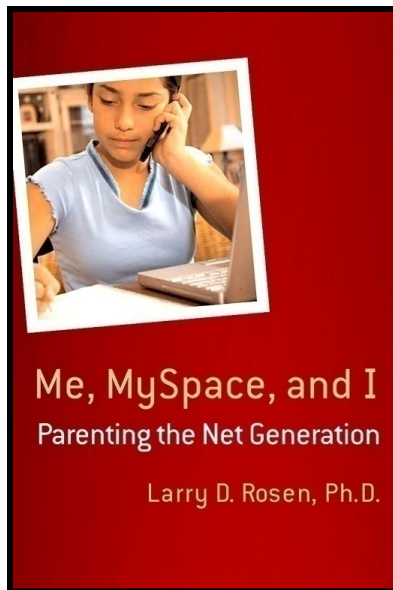
- Nature Breaks (live or virtual)
- Music/Art (but only beautiful)
- Exercise
- Laughter
- Hot Bath
- Talking (live) to a friend (3:1 ratio of positives)
- Practicing a foreign language
- Playing a musical instrument
- Tech Breaks (they REALLY work!)

A SIMPLE ACRONYM FOR IMPROVING FOCUS

A-B-C Method:

- ✓ Aware of distractors
- ✓ Breathe – calm/reset your brain
- ✓ Choose strategies that do not involve screen distraction

ANY QUESTIONS?



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