

Attention in the Digital Age: Why Focus Is Fading — and What Leaders Can Do

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Why It Matters for Public Works

Engineering and public works demand precision, safety, and sustained focus.

Distracted Workers Impact:

- Safety
- Quality and Rework
- Training and Learning Curves
- Team dynamics/Generational Differences
- Mental Health and Fatigue

What is Attention?

Your brain's ability to prioritize a subset of information in order to fully understand your environment.

“Attention is a *limited* resource that can be strengthened or depleted depending on our environment.”



What is Attention?

Three
systems
govern
focus:

- **Flashlight** – Selective Attention
 - *Studying a Bridge Plan*
- **Floodlight** – Alerting system.
 - *Someone shouts on a job site*
- **Juggler** – Executive Function
 - *My deadlines, goals, and next steps*

What is Multi- tasking?

Multitasking feels productive, but it's really rapid task switching.

The brain cannot shine two flashlights at once

Task switching requires brain energy

Multitasking increases stress hormones, heart rate, and error rates.

How Digital Design Interrupts Attention

Result: These designs train the brain to expect distraction and erode sustained focus

- **Triggers:**
 - Notifications, Pings, Clickbait
- **Endless Content:**
 - Auto-play/endless scroll, Personalized Feeds
- **Sticky Mechanics:**
 - Reward Loops, Exit Friction

Impact on the Modern Brain



People switch “work spheres” every 10 min.



Each switch drains mental energy and increases error risk.



Rapid and chronic switching increases stress and reduces working memory.



It can take as much as 25 min. to regain full focus after interruption



Average computer-task focus:

2½ minutes (2004) → 47 seconds (2021)

Upward Trend for Students

Schools have students learn on screens, not paper

Students spend 4–6 Hrs/Day on devices, even for reading and note-taking

Handwriting and discussion skills have declined.

Brains crave novelty and instant feedback but struggle to sustain focus.

What Professors Are Seeing in the Classroom

Students handle short verbal directions well but falter with long verbal or written ones.

Heavy reliance on 'search' functions over comprehension.

Rising anxiety and impatience with delayed results.

“They look busy on their screens, but when called on, they have no idea what question was asked.”

Recovering our Focus Through Mindfulness and Meditation.

Meditation – The practice of intentional focus

Mindfulness - ability to be fully present in the moment.

Practicing Just 12 minutes/day, 4 days/week
improves attention

“Meditation is the tool. Mindfulness is the state you cultivate.”

HOW MEDITATION ACTS ON THE BRAIN

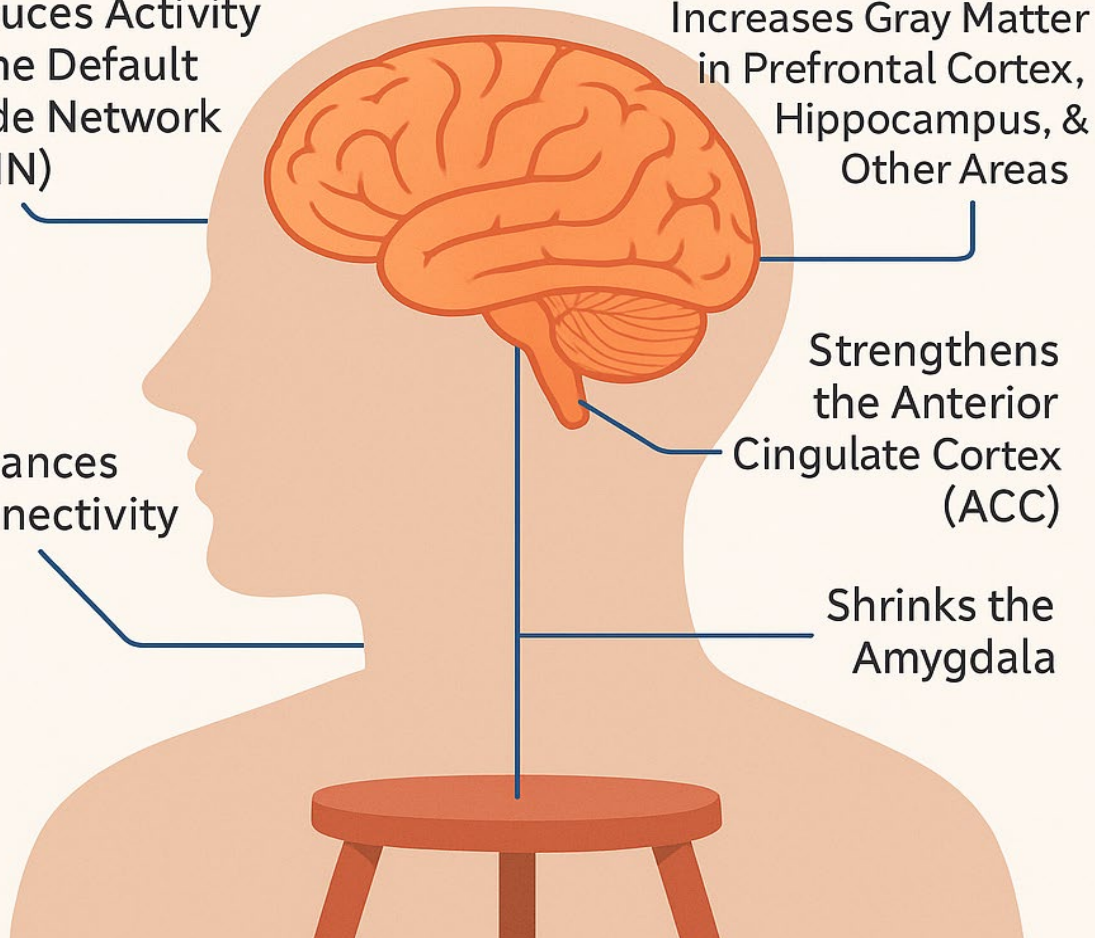
Reduces Activity
in the Default
Mode Network
(DMN)

Increases Gray Matter
in Prefrontal Cortex,
Hippocampus, &
Other Areas

Enhances
Connectivity


Strengthens
the Anterior
Cingulate Cortex
(ACC)

Shrinks the
Amygdala



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Practical Steps For Leaders

1. Model the Way
 2. Redesign training
 3. Focus Time
 4. Encourage analog tools
 5. Promote recovery
 6. Educate and raise awareness
 7. Reward Deep Work
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Closing Message

- Attention and safety go hand in hand — both require awareness and discipline.
- The goal is not to resist technology. It's to protect the human focus that makes our work safe, precise, and meaningful.
- We want to learn to leverage technology in the healthiest way possible in ways that support, not sabotage, our attention.
- Lead by example, foster focus, and help your teams reclaim their attention.

References

- **Mark, Gloria.** *Attention Span: A Groundbreaking Way to Restore Balance, Happiness, and Productivity.* Hanover Square Press, 2023.
- **Jha, Amishi.** *Peak Mind: Find Your Focus, Own Your Attention, Invest 12 Minutes a Day.* HarperOne, 2021.
- **Mel Robbins + Dr. Amishi Jha**
Podcast: “12 Minutes That Will Change Your Brain”
- **Buck, Daniel.** “The Digitization of American Schooling.” *The American Enterprise*, 2025.
- **Mueller, Pam A., & Oppenheimer, Daniel M.** “The Pen Is Mightier Than the Keyboard.” *Psychological Science*, 2014.
- **Ward, Adrian et al.** “Brain Drain: The Mere Presence of One’s Own Smartphone Reduces Available Cognitive Capacity.” *Journal of the Association for Consumer Research*, 2017.
- **Norwich University Engineering Faculty.** Personal correspondence on student attention and learning trends, 2024.

Additional Recommended Reading

- **Jonathan Haidt — *The Anxious Generation***
Deep dive into how digital technology shapes youth attention and mental health.
- **Nicholas Carr — *The Shallows***
Classic exploration of how the internet changes how we think and focus.
- **Johann Hari — *Stolen Focus***
A broader societal view of why staying focused is getting harder.
- **Cal Newport — *Deep Work: Rules for Focused Success in a Distracted World***
A practical guide on building habits of sustained concentration and reducing shallow, fragmented work.