Microlearning: Getting More with Less

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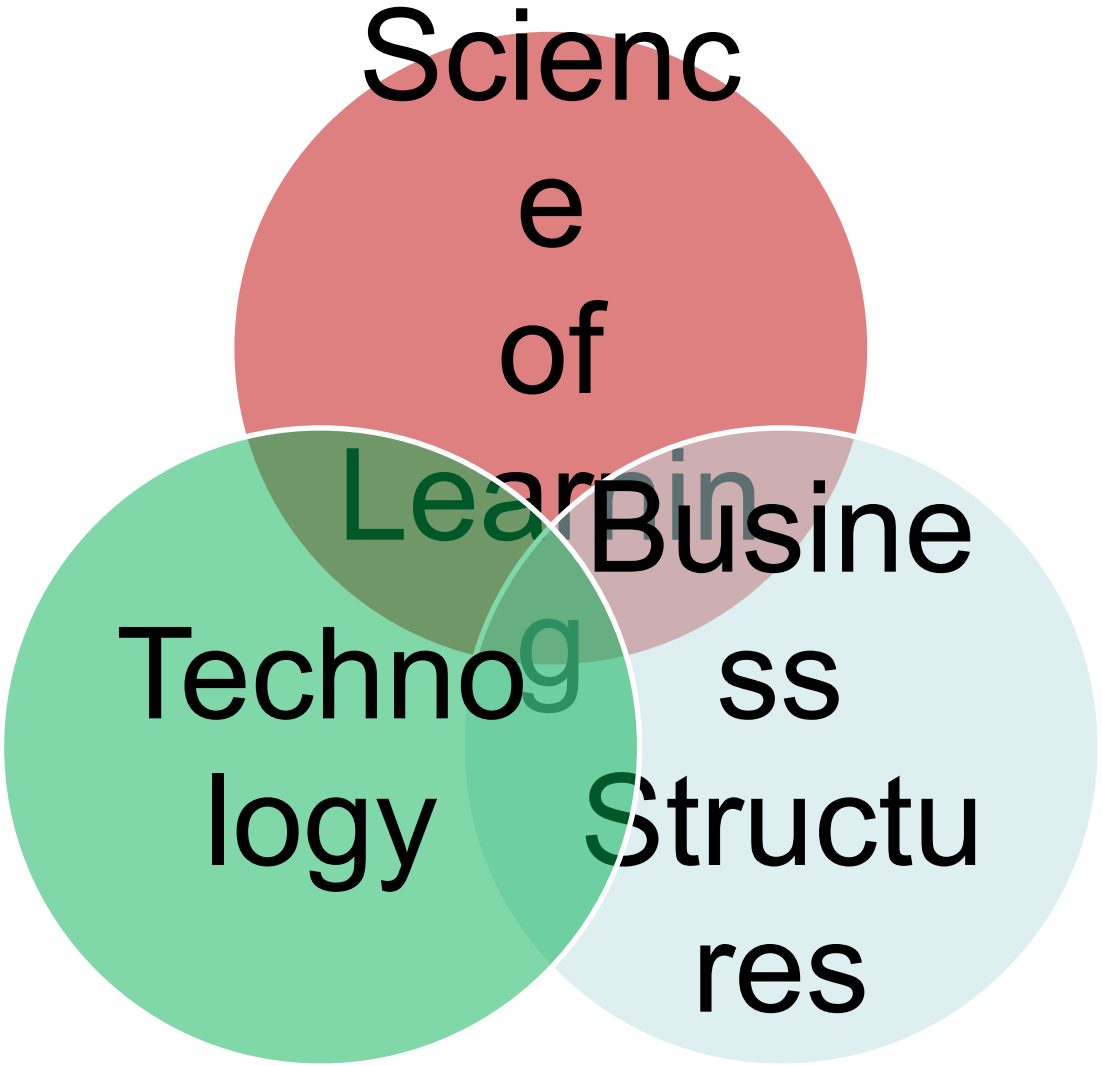
Yes…yes… I do see the irony…

The future is already here.

It's just not very evenly distributed.

Quote Attributed to William Gibson—Coined term cyberspace, author of the cyberpunk novel *Neuromancer* and futurist.

Convergence Leads to Innovation



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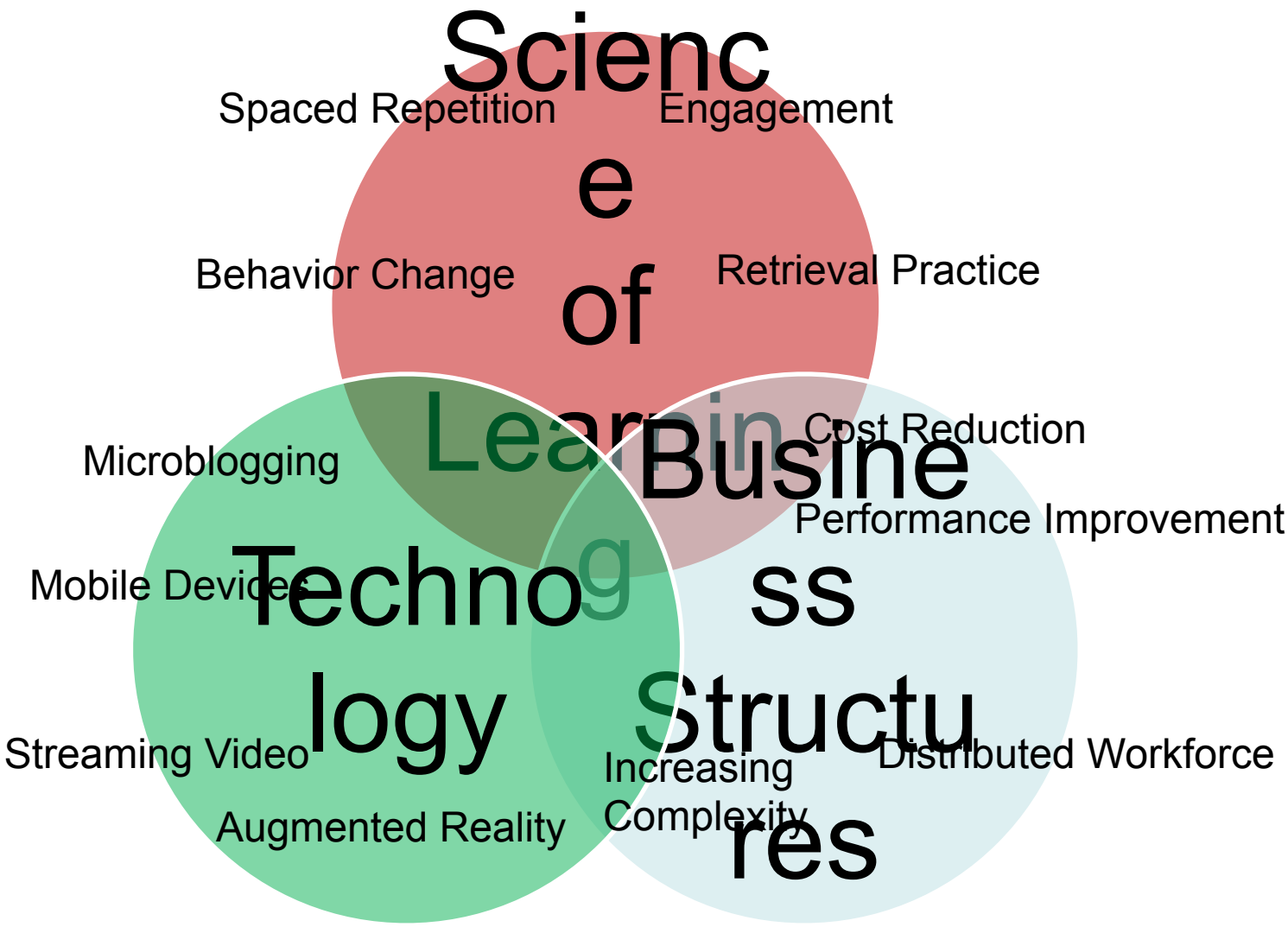

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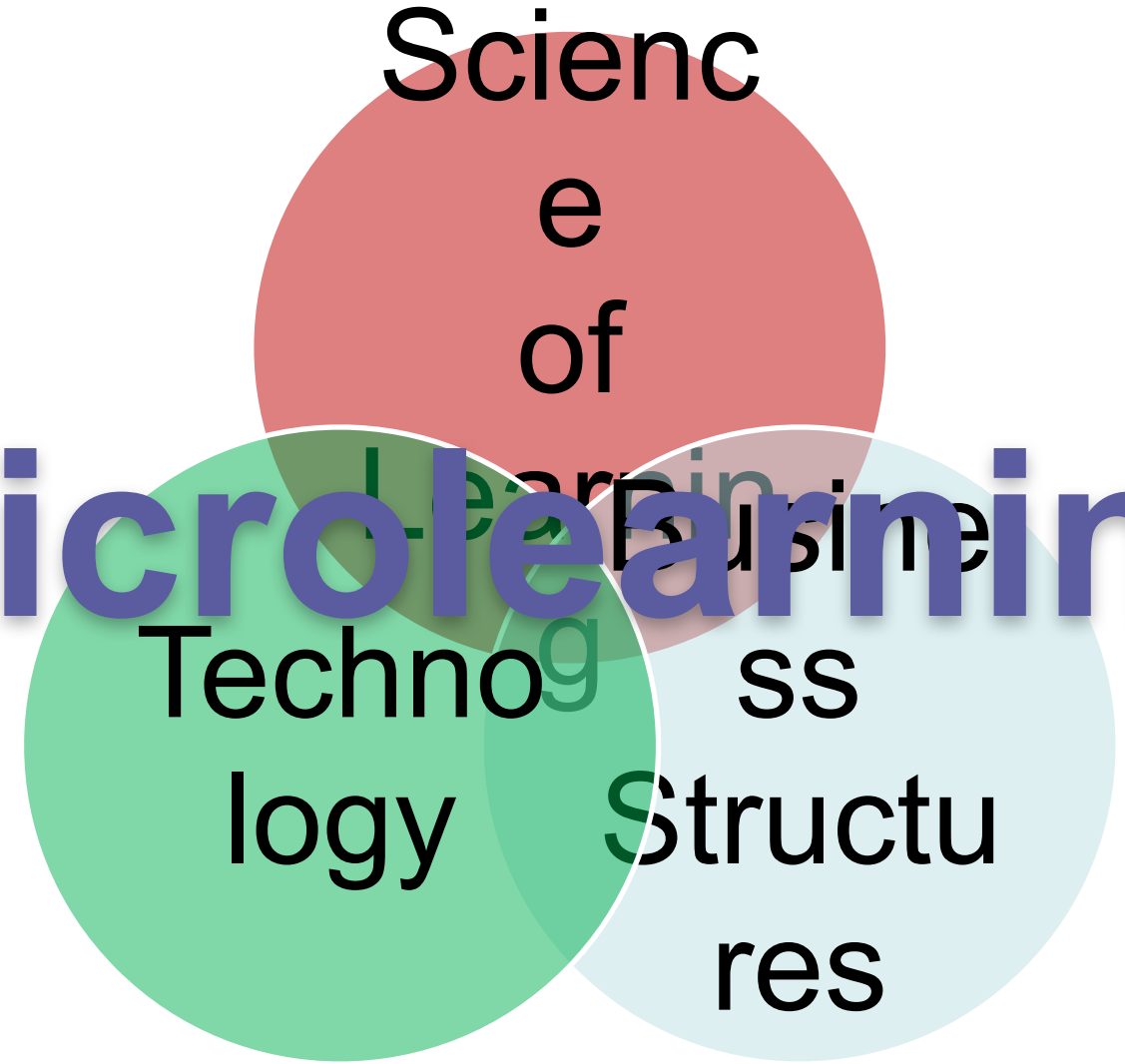


Microlearning

- Microlearning is a way of delivering content to learners in small, very specific bursts over time or as needed.
  - Short time bursts
  - Simple/narrow topic focus
  - Delivered anywhere
- Supporting Trends:
  - Science
  - Mobile Devices
  - Streaming Video

Let's Play

Microlearning Challenge…

Text the message karlkapp to the number 37607
AT&T
9:37 AM
73%
New Message
Cancel
To: 37607
karlkapp

Technology

We’ve learned and struggled for a few years here figuring out how to make a decent phone. PC guys are not going to just figure this out.

They’re not going to just walk in.

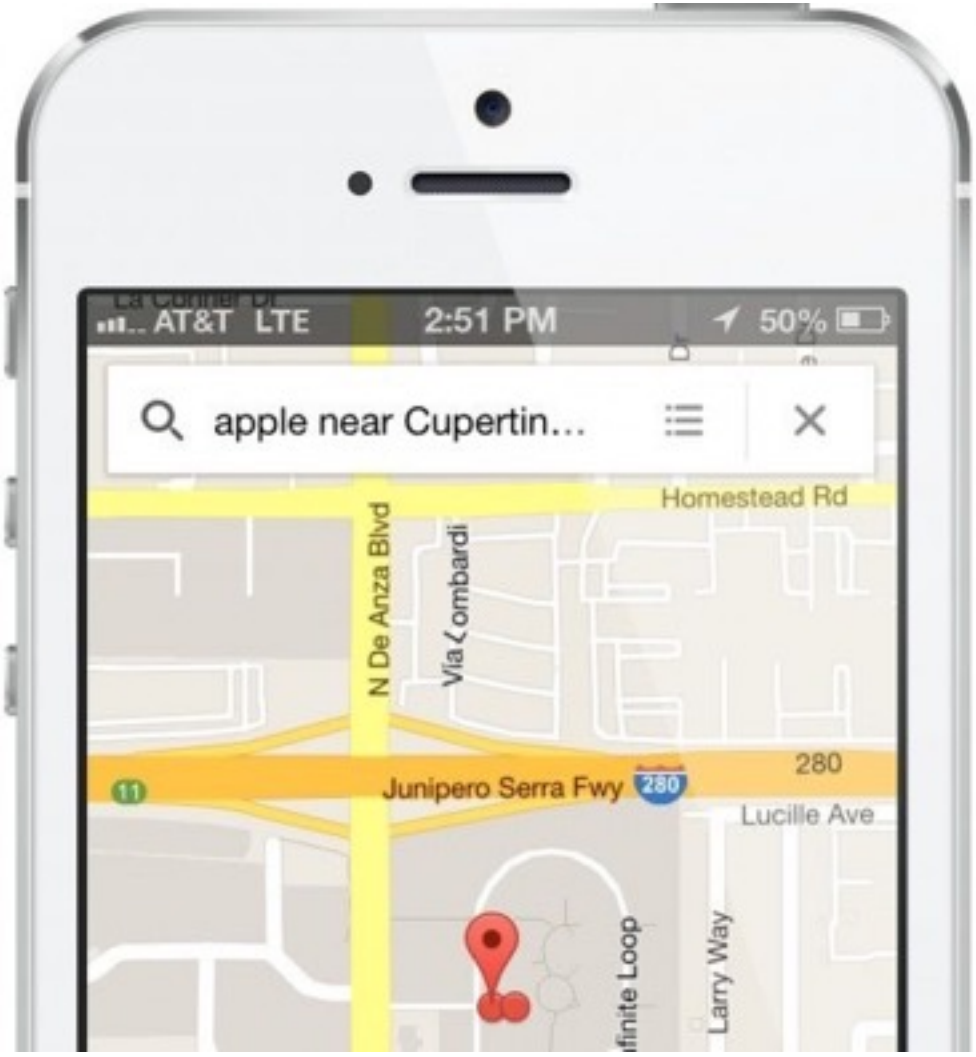
--Palm CEO Ed Colligan, 16 Nov 2006

By March 2014 Apple sold over 500 million iPhones.

Palm sold to HP in 2010, by 2011 Palm was done.

http://www.forbes.com/sites/markrogowsky/2014/03/25/without-much-fanfare-apple-has-sold-its-500-millionth-iphone/

How do I get to….



Capability	Block II Apollo Guidance Computer AGC	iPhone 6
Memory	36,864 words of ROM	1GB RAM
Storage	2,048 words	128 GB
Clock Speed	2.048 MHz	1.4 GHz

Your poll will show here

1

Install the app from
pollev.com/app

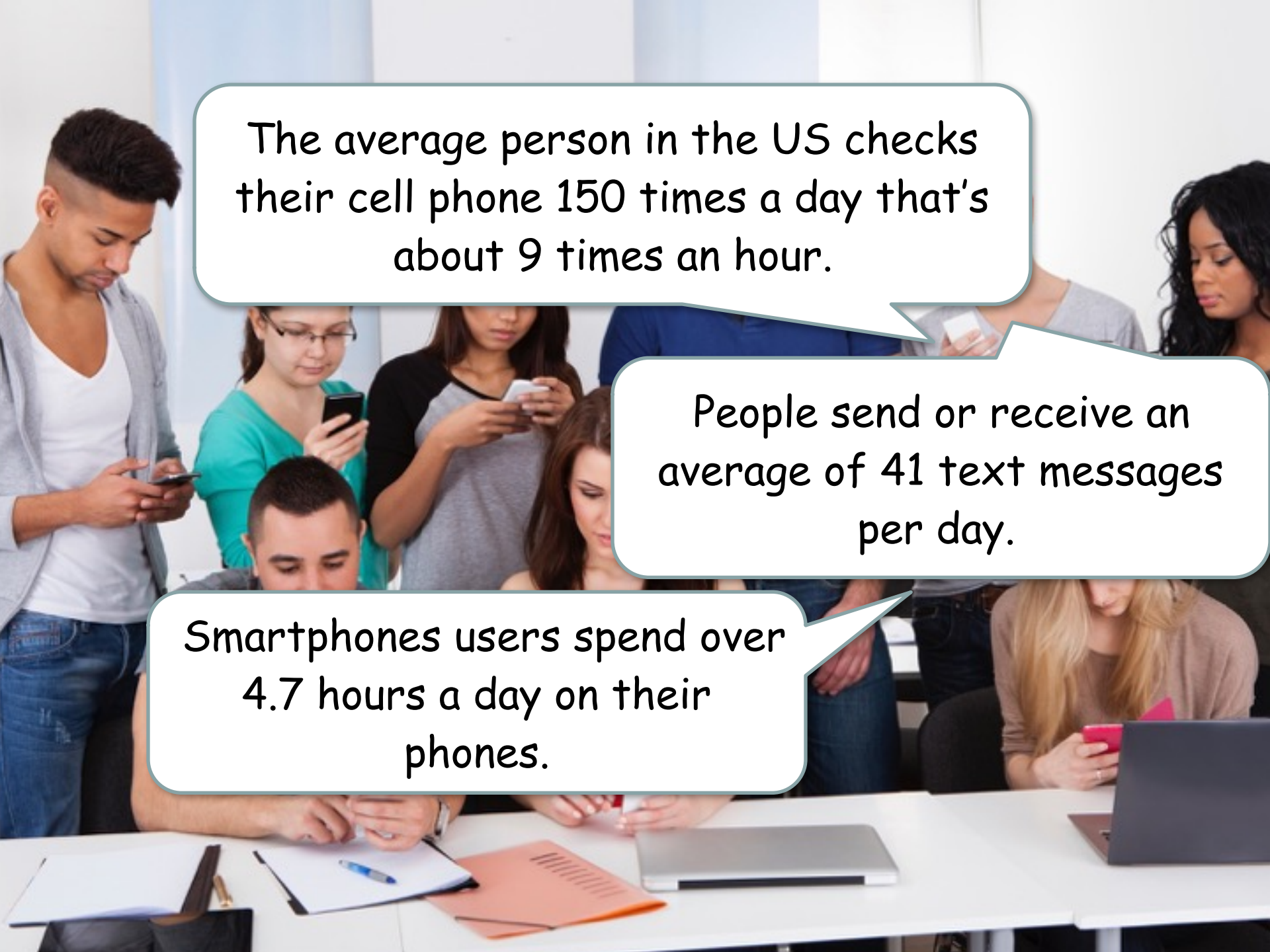
2

Make sure you are in
Slide Show mode

Still not working? Get help at pollev.com/app/help

or

Open poll in your web browser


The average person in the US checks their cell phone 150 times a day that's about 9 times an hour.
People send or receive an average of 41 text messages per day.
Smartphones users spend over 4.7 hours a day on their phones.

The average person spends 2 hours a day playing games on their smart phone.

65% of US smartphone users check their phones within 15 minutes of waking up.

83% of 6-9 year olds use a tablet.

84% of 13-17 year olds own a mobile phone.

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Drum Mixing Techniques

Managing PHP Persistent Sessions

Up and Running with NPM, the Node Package Manager

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Travel Photography: A Photographer in Cuba

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Drawing and Painting in Photoshop - The Great Training

10-minute tips

Productivity Tips for Web Designers : Jul

...s to write

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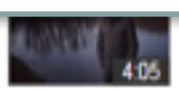


: Jul 2

Reasons for shooting images alone

Marketing Tips : Jul 1

The 17-minute SEO

View where you last left off. Not a member?

LinkedIn purchased video content provider Lynda.com for $1.5 billion dollars.

Average length of Lynda.com video = 4 minutes.

© 1995–2015 lynda.com, Inc.

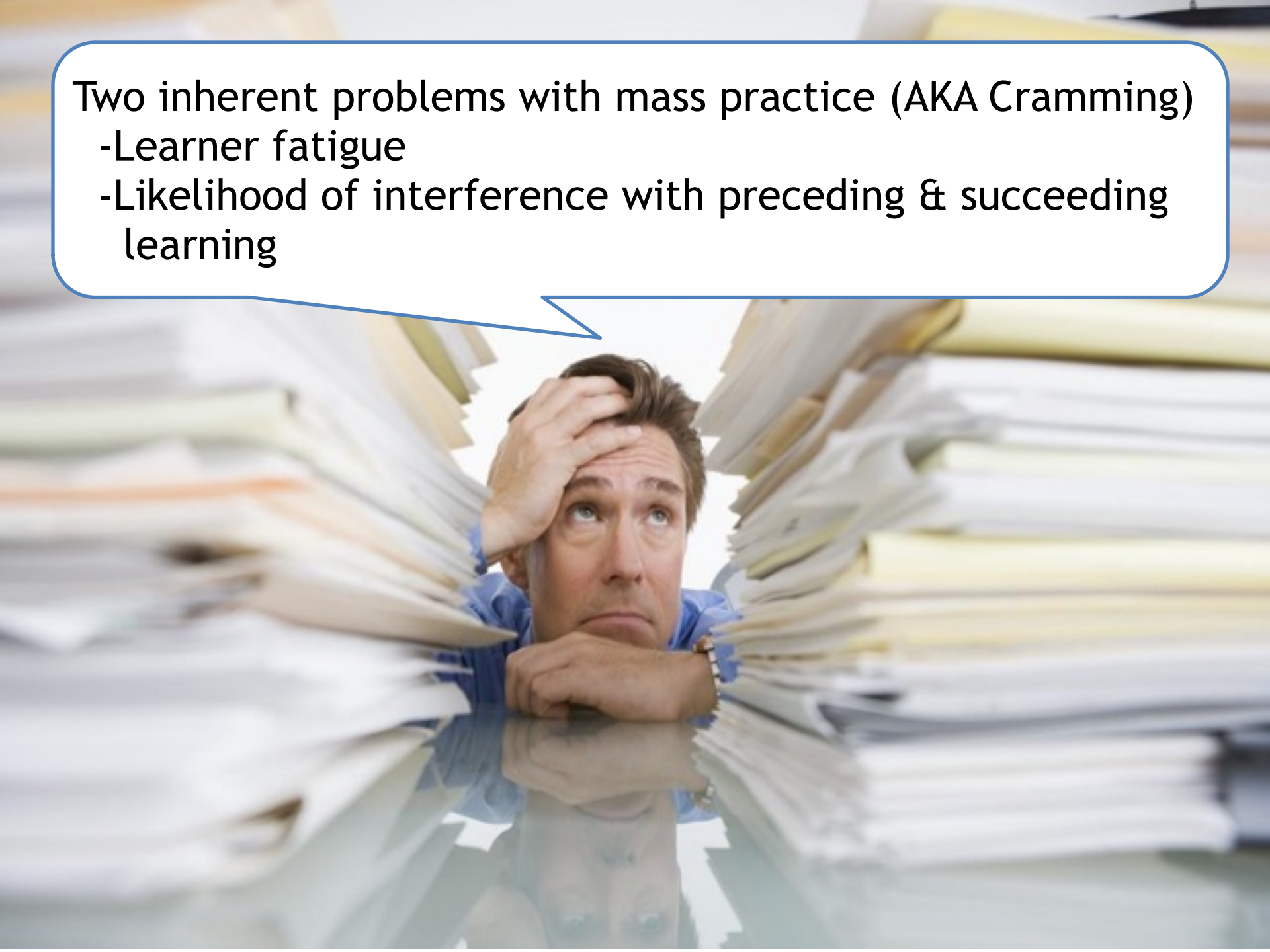
Why join? | Follow | About us | Press | Careers | Products | Support | Site feedback

Average person spends 413 minutes a month accessing online video services.
YouTube

Technology Questions

- Do you envision video being part of the micro-learning exercises?
- Do learners have computers and smartphone access?
- Would you prefer to document this training completion as part of the learner's transcript?
- Is WiFi readily available?

Science


Two inherent problems with mass practice (AKA Cramming)
-Learner fatigue
-Likelihood of interference with preceding & succeeding learning

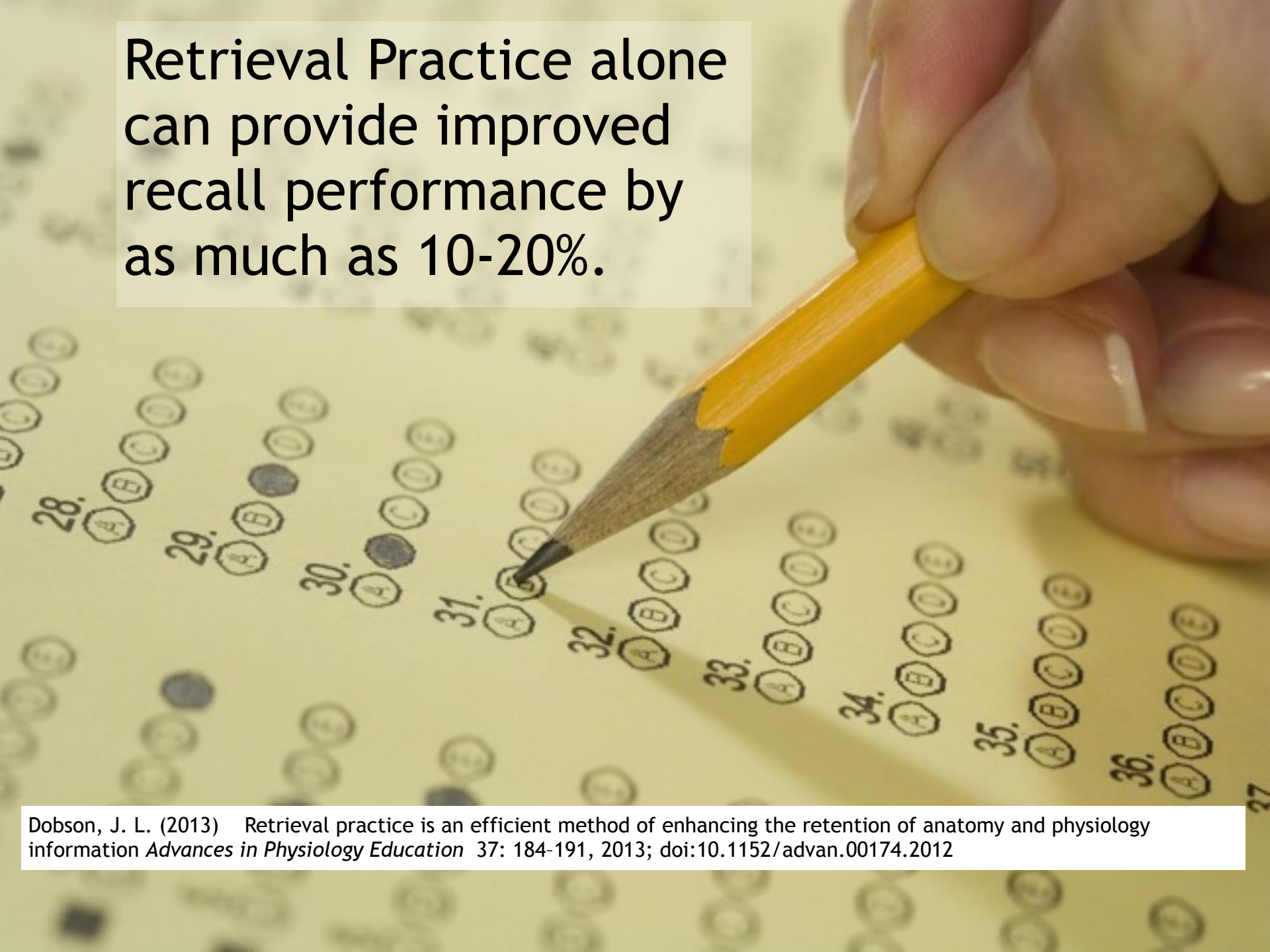
Two Powerful Instructional Phenomenon

Retrieval Practice
(Questioning Format)

Spaced Repetition
(Interval Reinforcement)

Larsen DP, Butler AC, Roediger HL 3rd. Repeated testing improves long-term retention relative to repeated study: a randomized controlled trial. *Med Educ* 43: 1174–1181, 2009.

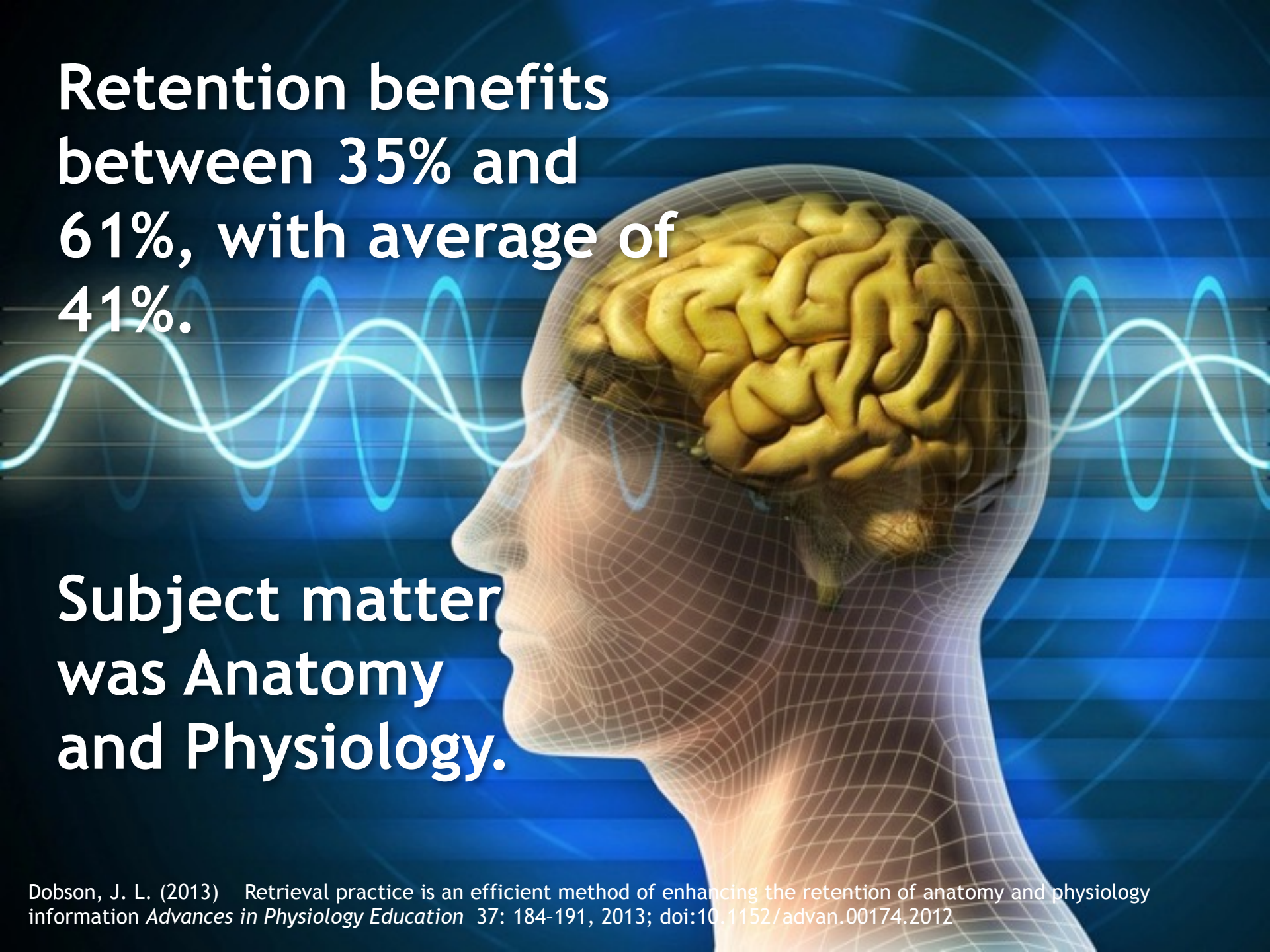
Dobson, J. L. (2013) Retrieval practice is an efficient method of enhancing the retention of anatomy and physiology information *Advances in Physiology Education* 37: 184–191, 2013; doi:10.1152/advan.00174.2012.



Dobson, J. L. (2013) Retrieval practice is an efficient method of enhancing the retention of anatomy and physiology information *Advances in Physiology Education* 37: 184–191, 2013; doi:10.1152/advan.00174.2012

Spaced Repetition

Carpenter SK, DeLosh EL. Application of the testing and spacing effects to name learning. *Applied Cognitive Psychology* 19: 619–636, 2005. And Cull W. Untangling the benefits of multiple study opportunities and repeated testing for cued recall. *Applied Cognitive Psychology* 14: 215–235, 2000.



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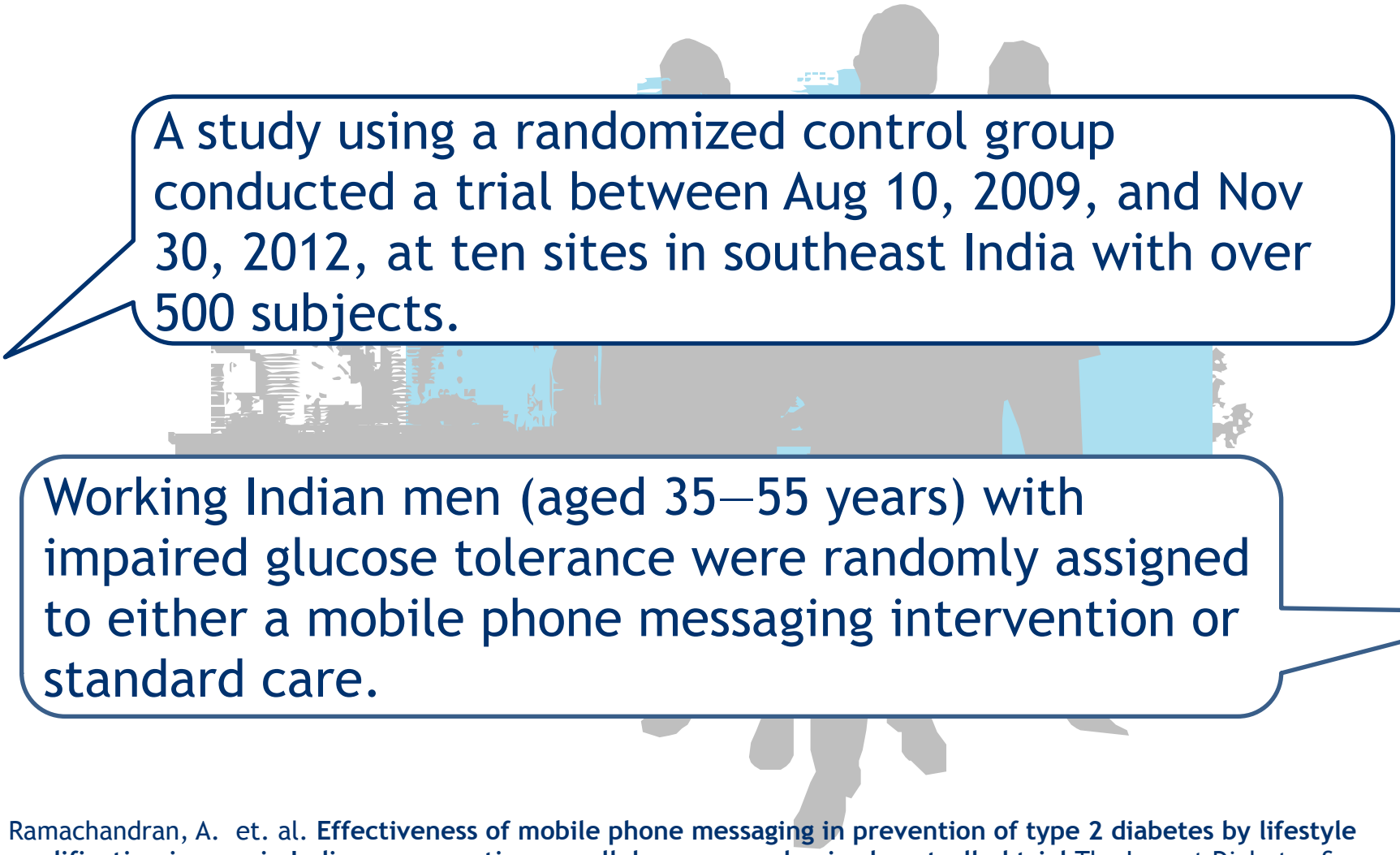


Ramachandran, A. et. al. **Effectiveness of mobile phone messaging in prevention of type 2 diabetes by lifestyle modification in men in India: a prospective, parallel-group, randomised controlled trial** The Lancet Diabetes & Endocrinology, Early Online Publication, 11 September 2013 doi:10.1016/S2213-8587(13)70067-6

"Use stairs instead of an elevator"

"Avoid snacks while watching TV; you may overeat. "

Ramachandran, A., et. al.., **Effectiveness of mobile phone messaging in prevention of type 2 diabetes by lifestyle modification in men in India: a prospective, parallel-group, randomised controlled trial** The Lancet Diabetes & Endocrinology, Early Online Publication, 11 September 2013 doi:10.1016/S2213-8587(13)70067-6

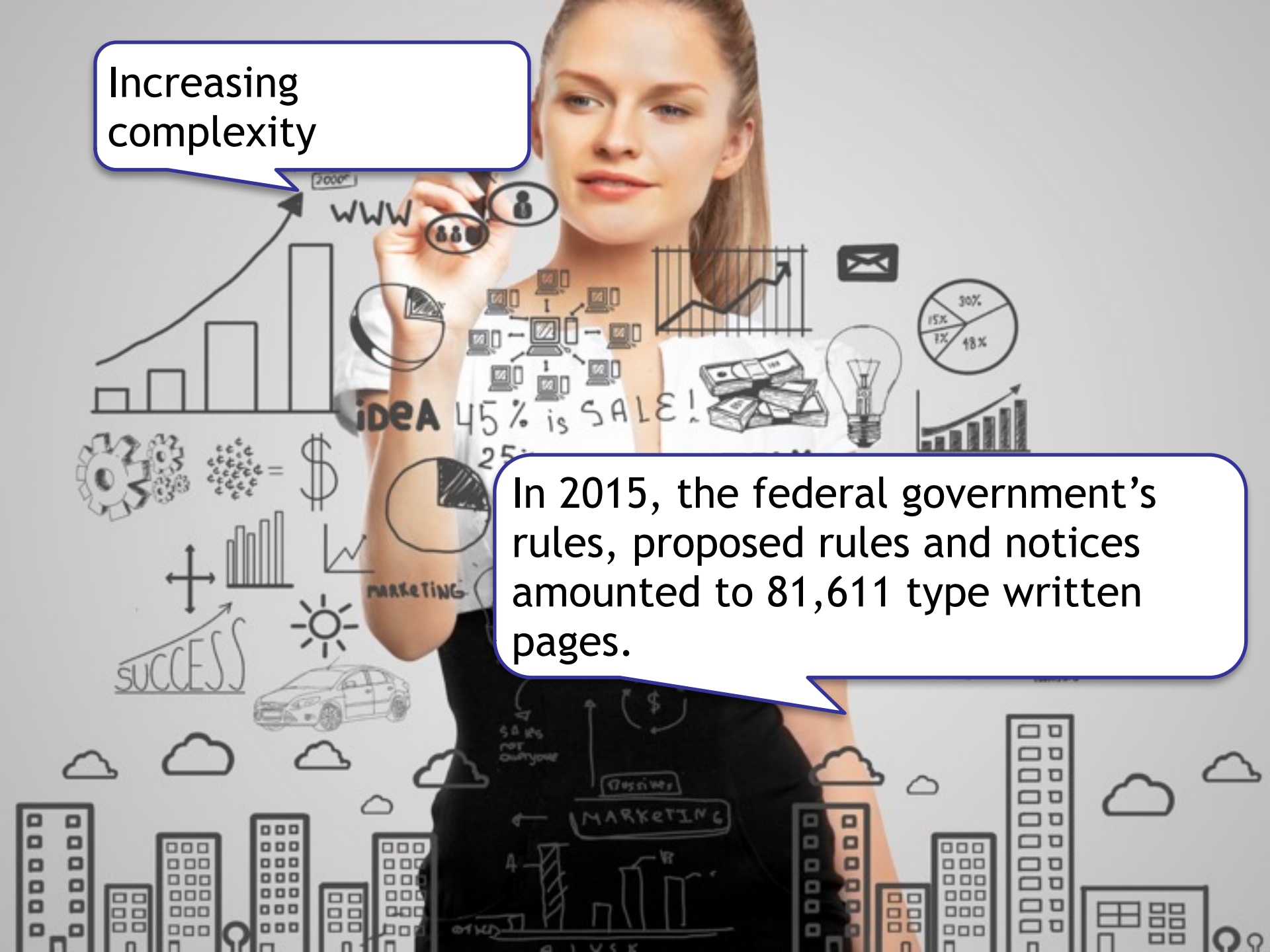
Lowered risk of developing Type 2 diabetes by 36%.

Ramachandran, A., et. al.., **Effectiveness of mobile phone messaging in prevention of type 2 diabetes by lifestyle modification in men in India: a prospective, parallel-group, randomised controlled trial** The Lancet Diabetes & Endocrinology, Early Online Publication, 11 September 2013 doi:10.1016/S2213-8587(13)70067-6

Learning Science Questions

- What specific change(s) do you expect from the learners?
- How would you expect to divide the learning topic into five or 10-minute segments? For example, is the topic a production operation that takes 30 minutes?
- What kind of visuals would be valuable for the micro-learning program? A demonstration of correct product in usage?

Business Structures


Increasing complexity
WWW
iDeA
45% is SALE!
MARKETING
SUCCESS
In 2015, the federal government's rules, proposed rules and notices amounted to 81,611 type written pages.

Performance Improvement

Cost Reductions

Distributed Workforce

Business Questions

- Has your company developed micro-learning programs in the past? If yes, did you feel it was successful? How did you measure this success?
- To which topic would you to apply micro-learning? What are the business objectives?
- What existing training occurs on this topic? SOP training? Classroom? Existing eLearning?
- Could you describe your learners and their environment? Are they located centrally or around the world?

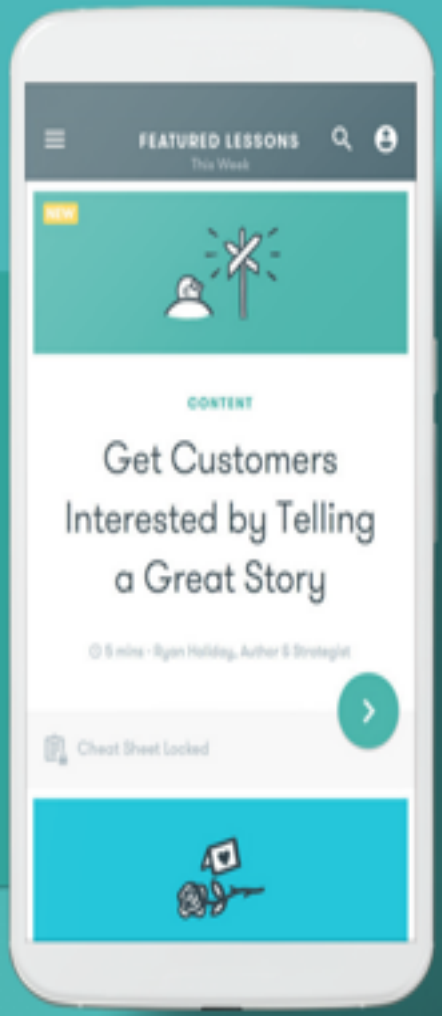
Who is using it for what?

Multinational

https://www.yourprimer.com

Primer

About FAQ



Google uses microlearning internally and is offering a microlearning service.

Ge
every week.

We're constantly adding more lessons. So whether you need to brush up on the basics or explore advanced subjects, Primer can teach it all to you in a no-nonsense, no-jargon way.

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A Pilot Program by Google

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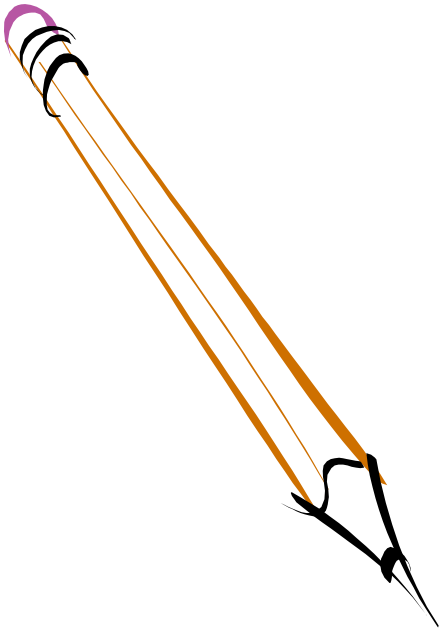
40% of all US colleges and universities.
CARVER HALL

74% of people use mobile devices for e-learning

Gamification:
$11.10 Billion USD by 2020

Take Aways



Remember:
The future is often “AND” not “OR”

Quote Attributed to Daniel Burrus-technology futurist, strategist, consultant and author on technology trends, future predictions, scientific advances and business