



MICRO-LEARNING IN THE MATH CLASSROOM

Leslie Johnson

Assistant Department Chair, Mathematics

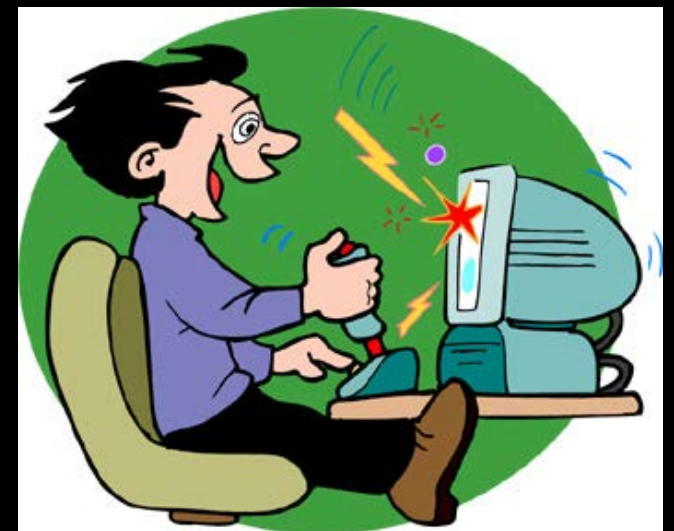
Purdue Global University

QUESTIONS TO ADDRESS

1. What is micro-learning?
2. How am I using micro-learning in my personal and professional life?
3. How can I create math micro-learning for my students?
4. What are the best ways to incorporate micro-learning in my classes?

WHAT IS MICRO-LEARNING?

- Learning in small, “bite sized” chunks (Gutierrez, 2014)
- Covers only one or very few topics
- Spaced repetition
- Usually involves multimedia and gamification
- Typically under 10 minutes
- Mobile



WHY CHOOSE MICRO-LEARNING?

- “Research has shown that we learn more (and retain it better) when we study in short focused bursts than when we’re forced to sit through hour long classes — but of course your younger self that was bored to tears at school knew that already.” (Andriotis, 2015)
- Can be completed during “dead time”
- Fun and engaging
- Often cheaper than the alternatives

EXAMPLES OF MICRO-LEARNING

HUGE in industry right now

- New Employee Training
 - Domino's Pizza Maker Course via [AllenComm](#) helps employees learn the menu (3 micro-learning modules)
- Ongoing Employee Training
 - Google places a flyer on the back of the bathroom door!
 - Uber Technologies Inc. – Duolingo to learn English better (Kolodny, 2013)
 - Young learners: [BrainPOP](#)
 - All ages: [Khan Academy](#)
 - All ages: [TED Ed](#)



MICRO-LEARNING IS NOT

- An hour long lecture
- Reading for a long stretch of time
- A video with no follow-up
- A long video (over 10 minutes)
- A video with too much "fluff"
- Stand alone curriculum
- Right for every kind of learning



HOW MUCH OF A MICRO-LEARNER ARE YOU?

Which of the following do you do on a regular basis?

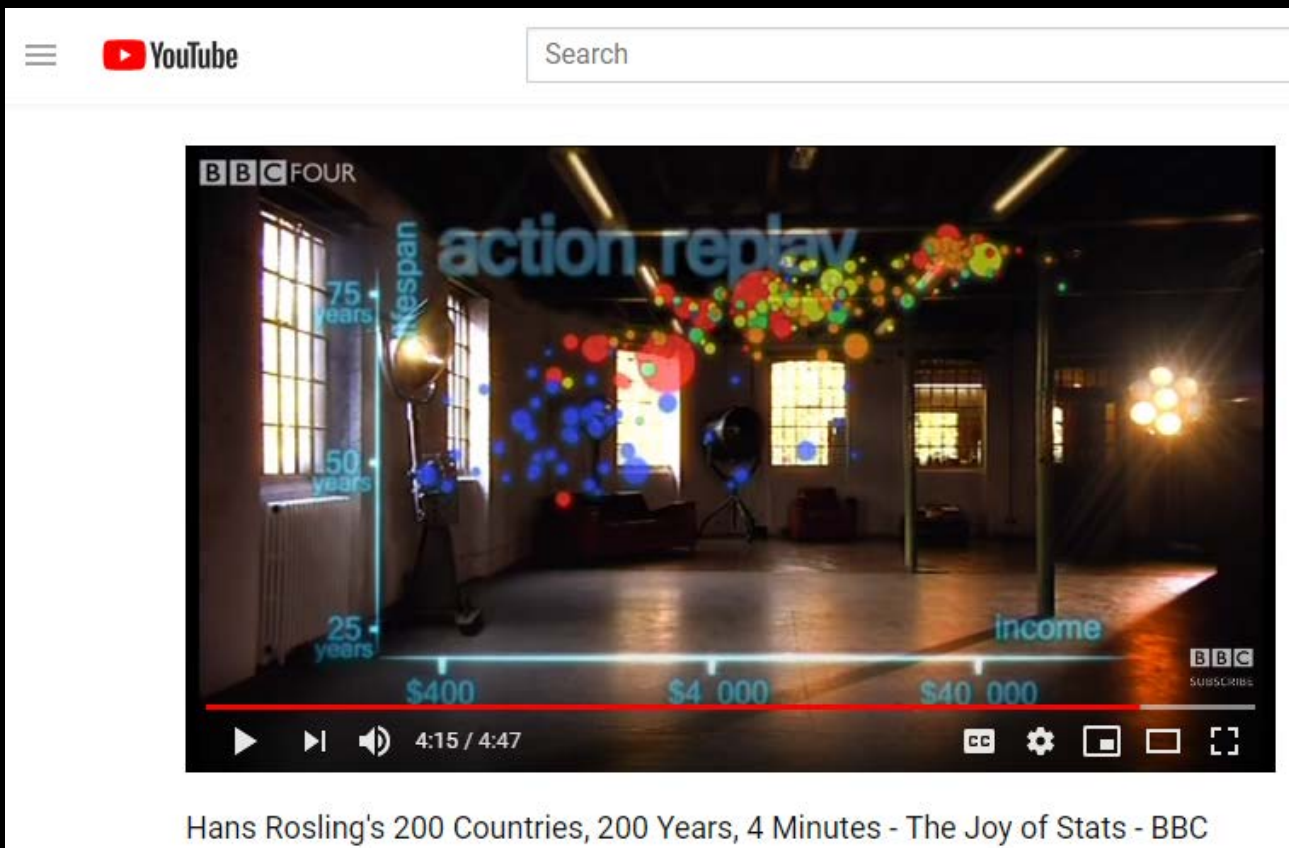
- Read brief summaries on websites, blogs, or apps
- Get on social media to learn
- Watch a TED Talk
- Go to YouTube to learn about a single topic
- Read a "___ of the day"
- Complete training for work in small increments
- Create a quick How To video for a student or coworker.

HOW CAN I CREATE MATH MICRO-LEARNING FOR MY STUDENTS?

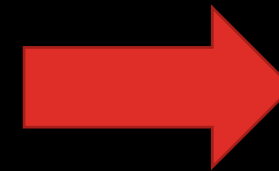
- Videos
 - Screencastomatic.com
 - Animoto, GoAnimate, etc.
 - YouTube for cc, storing, and sharing
- Quizzes & Polls
 - PlayBuzz
 - Poll Everywhere
- PlayPosit



PLAYPOSIT DEMO TIME!



The screenshot shows a YouTube video player interface. At the top left is the YouTube logo and a search bar. The video content is a BBC Four broadcast titled "action replay" featuring Hans Rosling's "200 Countries, 200 Years, 4 Minutes" presentation. The video displays a room with a large screen showing a graph of income over time. The graph has three points: \$400 at 25 years, \$4,000 at 50 years, and \$40,000 at 75 years. The word "income" is written on the right side of the graph. The video player controls at the bottom show the video is at 4:15 / 4:47. Below the video player, the text reads: "Hans Rosling's 200 Countries, 200 Years, 4 Minutes - The Joy of Stats - BBC".



Video with
embedded quiz
questions!

HOW SHOULD I INCORPORATE MICRO-LEARNING IN MY CLASSES?

- Teaser/Intro
- Pretest
- As a supplement class readings
- Review
- Pairs great with Competency Based Education (CBE)!





QUESTIONS?

Leslie Johnson,
Assistant Department Chair, Mathematics
Purdue University Global
ljohnson6@purdueglobal.edu

REFERENCES

- Andriotis, N. (2015, September 01). Everything you wanted to know about micro-learning [Web log post]. Retrieved from <http://www.efrontlearning.net/blog/2015/09/everything-you-wanted-to-know-about-micro-learning-but-were-afraid-to-ask.html>
- Gutierrez, K. (2014, April 15). The Age of Bite-sized Learning: What is It and Why It Works [Web log post]. Retrieved from <http://info.shiftelearning.com/blog/bid/342367/The-Age-of-Bite-sized-Learning-What-is-It-and-Why-It-Works>
- Kolodny, Lora. (2013, March 13). "The Latest Approach to Employee Training." WSJ. Retrieved from <http://www.wsj.com/articles/the-latest-approach-to-employee-training-1457921560>