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## Generational Shift: Why We Should Modify Our Instructional Strategies for the Next Generations of Aviators

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# Generational Shift:

## Why We Should Modify Our Instructional Strategies for the Next Generation of Aviators

Mary Niemczyk, PhD  
NTAS 2017



# Overview

- Generational Cohorts
- Characteristics of the Millennial Generation
- 4 A's of Learning
- Instructional Strategies (Gagne's 9 Events)
- What Millennials Say They Need for Success

# They're here...



75.4 million

Surpassed Baby-Boomers 74.9 million

Differences between generations can be the by-product of unique historical circumstances that members of an age cohort experience, particularly during a time when they are in the process of forming opinions.

- Pew Research Center

# Generational Cohorts

- Veterans (1922 - 1943)
- Baby Boomers (1944 - 1964)
- Generation X (1965 - 1980)
- Gen Y - Millennials (1981 – 2000)
- Gen Z (2001 -

Generational characteristics tend to be fixed



# Millennials 1981 - 2000



GRADE INFLATION

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>F</b>	<b>I</b>
AVERAGE	BELOW AVERAGE	COMPLAIN UNTIL YOU GET A BETTER GRADE	THE DEAN GETS INVOLVED	FILE LAWSUIT	IN COMPLETE DENIAL

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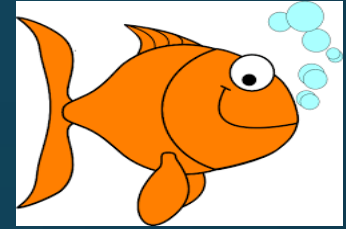
# TECHNOLOGY



Attention spans  
diminishing

2000 = 12 seconds

2013 = 8 seconds



9 seconds

Neuroscientists are concerned about the long term effect of technology – lazy & shallow thinking

Flattened world – unlimited access

Immediate access to just about everything

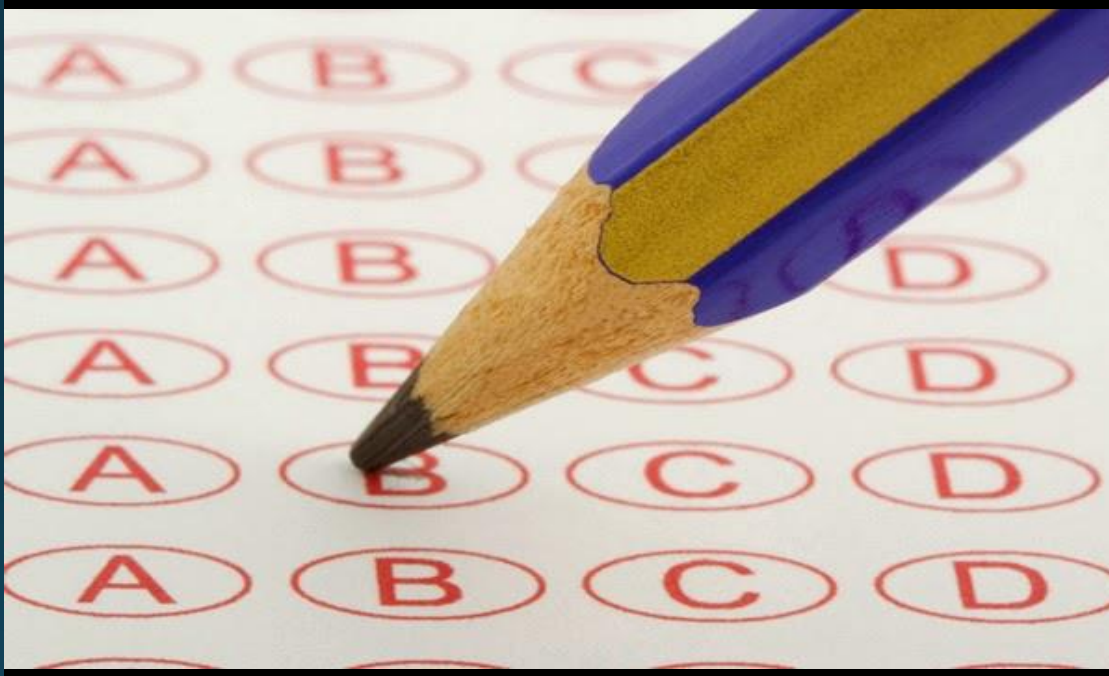
Creating a '*brand*'

FOMO – dopamine



# HIGH SCHOOL

Overuse of standardized tests is changing the nature of teaching, narrowing the curriculum, and limiting student learning.



There is no requirement for consistency among high school courses. For example, Algebra II courses may be closer in content to Algebra I.

Almost 40% of high school graduates are not adequately prepared for entry level jobs or college courses.

# COLLEGE



Most educated generation =  
higher student debt (\$27K average)

Fewer individuals read books which leads to a  
decline in the skills necessary to read long  
passages of text

More than 36% of first-year college students  
reported taking some remedial coursework -  
especially math

PIAAC results (22 countries):

**Literacy** - US millennials scored higher than only 2  
countries – Spain & Italy

**Numeracy** - ranked last, along with Spain & Italy

**Problem Solving** - also ranked last, along with the  
Slovak Republic, Ireland, & Poland

# ECONOMY



Higher levels of student loan debt, poverty and unemployment

Lower levels of wealth and personal income than their 2 immediate predecessor generations had at the same age

A tough labor market & high debt levels postponing major decisions

Shifting societal norms about when adulthood begins

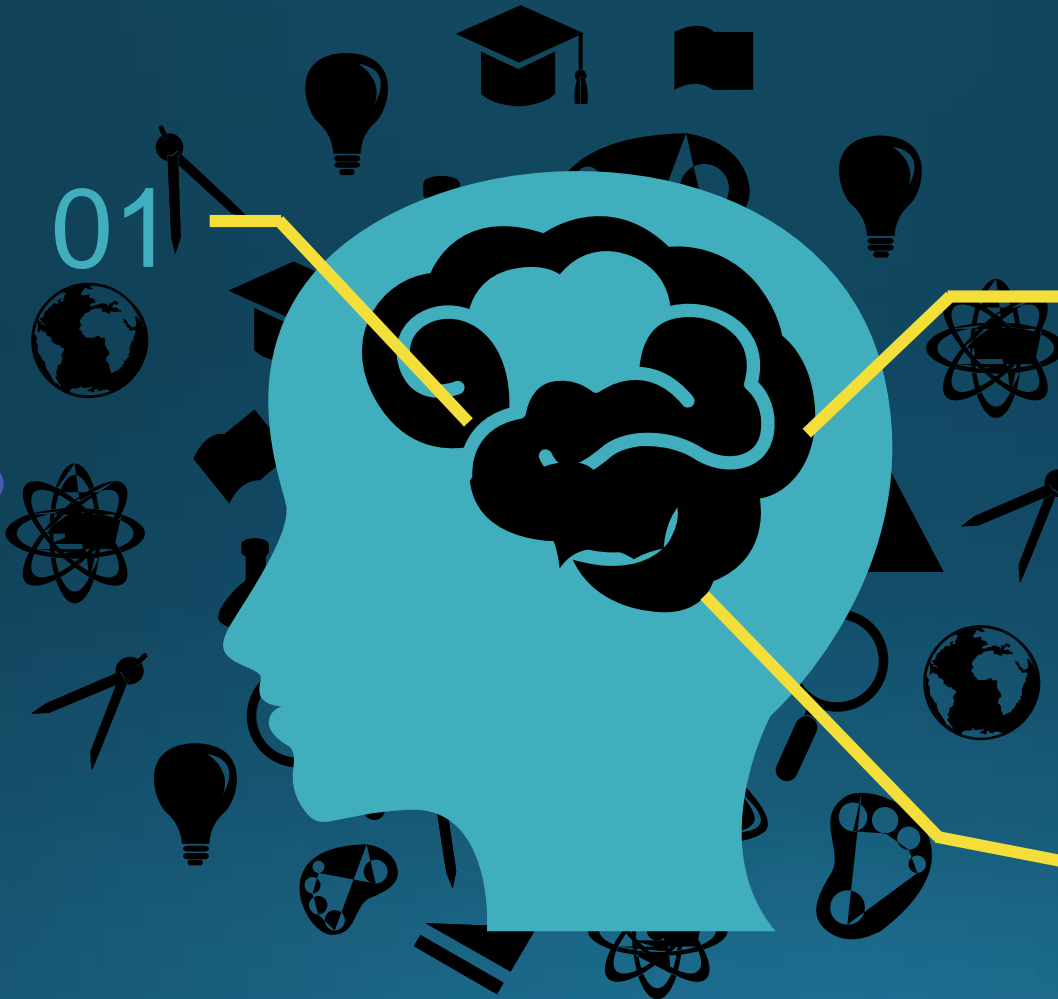
What Can Educators Do?

# Developing Millennial Learners

## 4 A's Of Learning



01



02

## Micro-Learning

Short, digestible,  
well-planned units

## Industry

Mentorship  
Share the 'why'  
Continuous  
development

03

# 4 A's of Learning





# Active

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## Instructor

- Gain the learner's attention
- Stimulate interest
- Make learners aware of what to expect so that they are prepared to receive information
  - What is the learning objective?

## Learner

- Be engaged
- Develop a plan
  - Establish learning/study goals
  - Determine strengths/weaknesses
- Ensure focus on learning objectives – levels of mastery

# Associate

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## Instructor

- Assist learners in remembering what they may already know about the concept/procedure
  - Remind them of prior knowledge

## Learner

- 'What do I already know about this?'
  - Making connections
  - Chunking / clustering
  - Acronyms
  - Diagrams
  - Stories/scenarios
- 'This is how I'm going to remember it'

# Anticipate

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## Instructor

- Show the learner how to think within the discipline - modeling
- Provide the learner with examples, explanations
  - stress key elements
- Ensure learners can transfer information to a novel situation

## Learner

- Think like an Aviator
  - This will create:
    - meaning
    - relevance
    - information will be contextual
    - information will be personal

# Awareness

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## Instructor

- Determine if the learner's acquisition of knowledge is at the appropriate level of mastery
- Measure their achievement/understanding based on the learning objective

## Learner

- How do I know what I know?
- How do I know what I *don't* know?
- **SAY IT!**
  - Talk about it
  - Teach it

# What Millennials Say They Need for Success

Patience

1

Sharper critical thinking skills

2

Knowledge – more understanding

3

# If We Do These Things

- Students will:
  - be more actively engaged
  - take more responsibility for learning
  - think within the discipline
  - develop conditional knowledge
  - be able to problem-solve, critically think, make decisions
  - develop the ability to be a successful lifelong learner



# Review

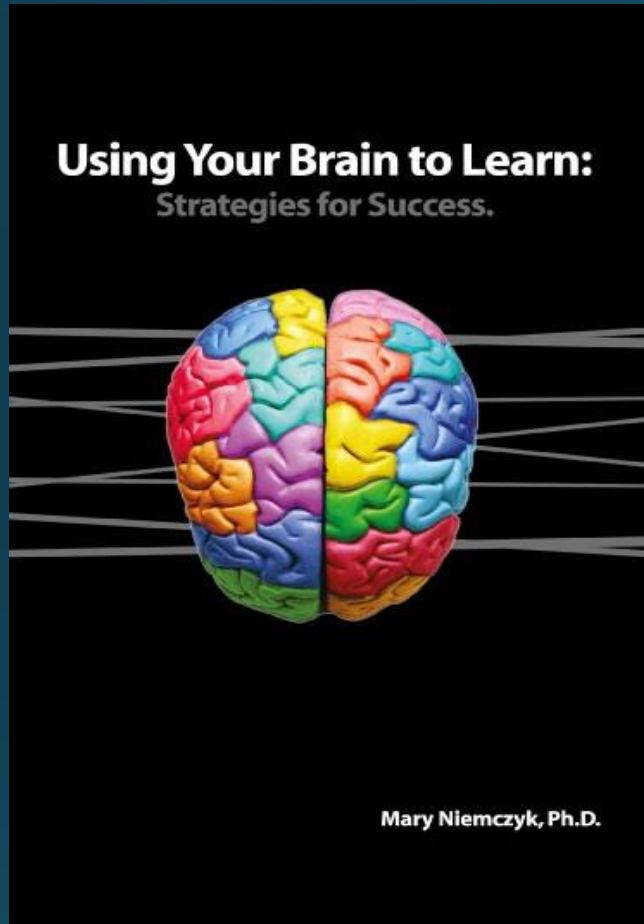
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Thank you!