

# Keynote Speech:

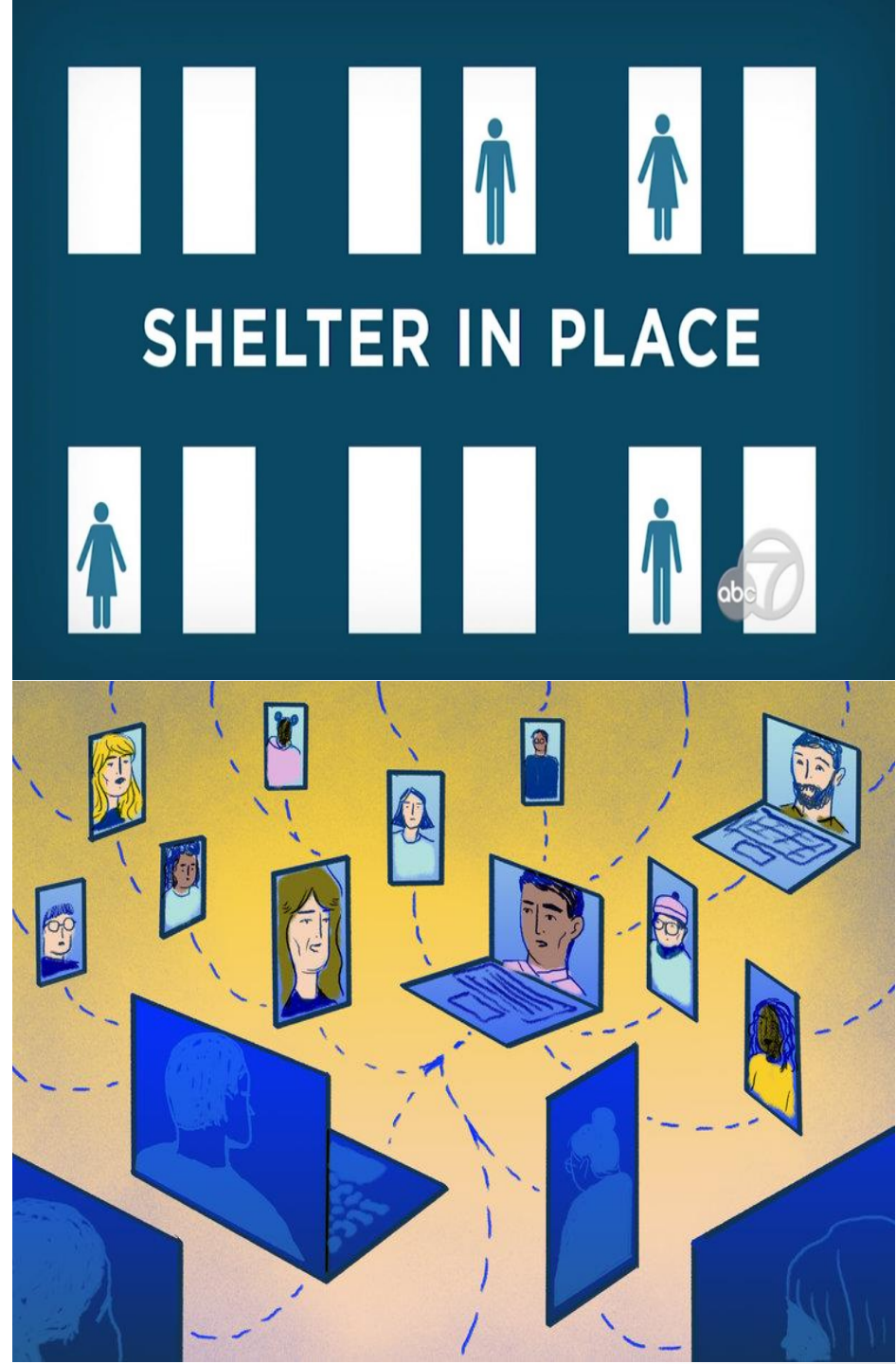
## New Possibilities in Education at the Nexus of Generational Change and Technological Innovation



Joy Kutaka-Kennedy, Professor  
National University, San Jose

# One thing certain in life is change ...

- But who could have ever imagined COVID-19?
- Shelter in place (*versus lockdown?*) mandates
  - a few months ago
  - around the world
- Creating huge disruptions
- Suddenly the entire world had to adapt to
  - Staying at home as much as possible
  - Working from home
- Socially isolating
  - Really physically isolating



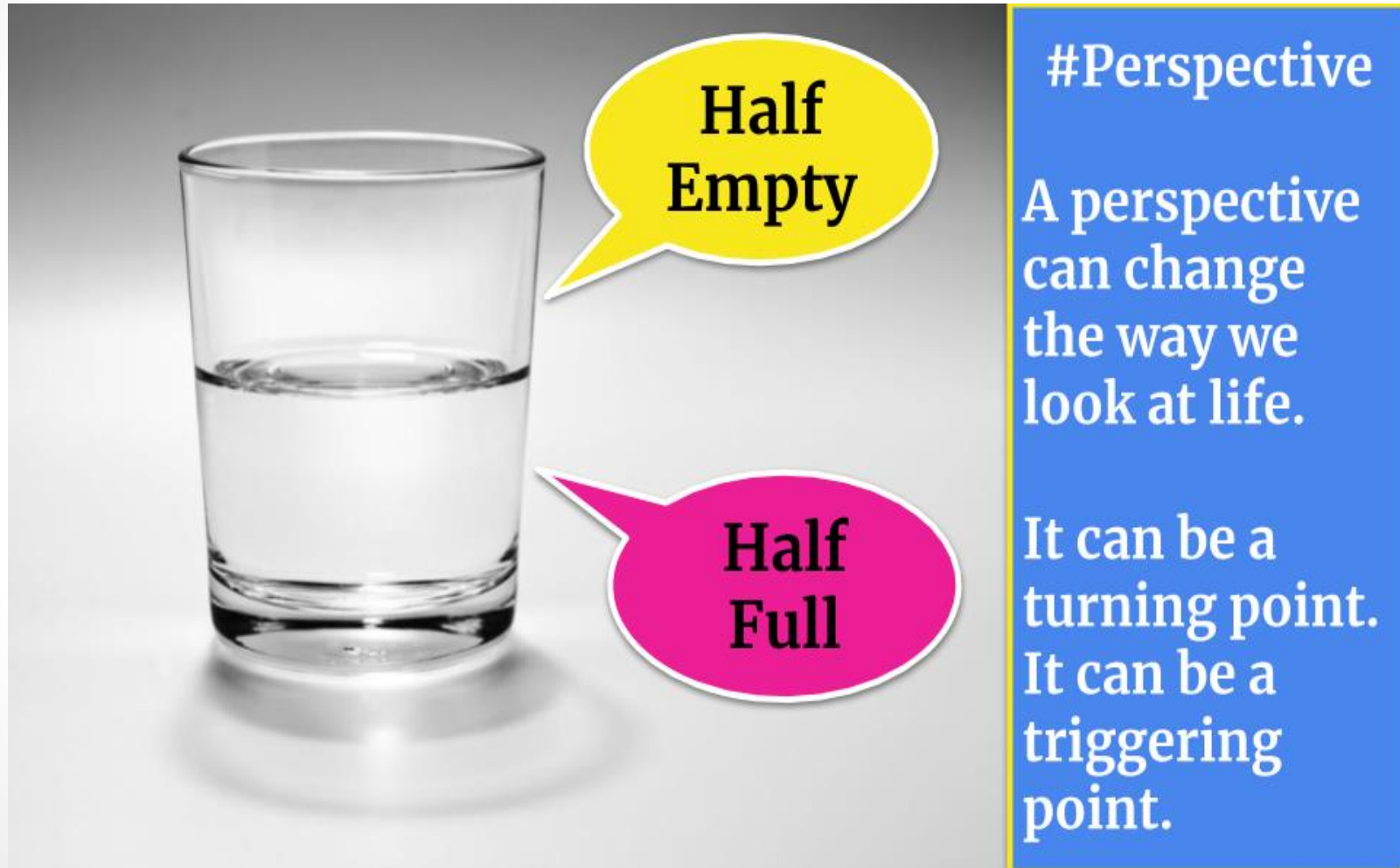
# What's lost, what's gained

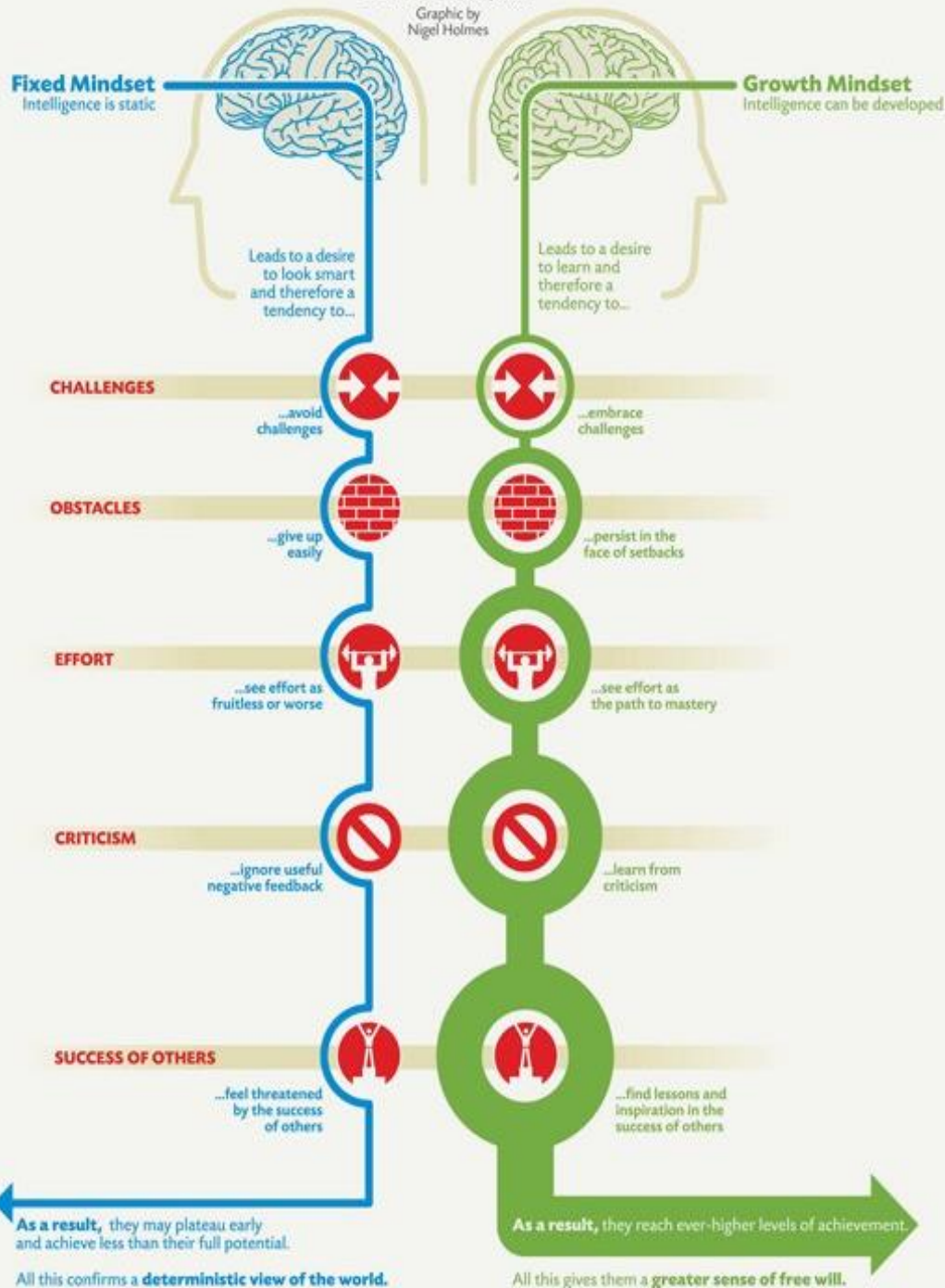
- Real losses
  - Sense of safety
  - Sense of security
  - Sense of connection
  - Economic security
- Possible positive gains
  - New mode of seeing
  - New mode of being
  - New mode of connecting
  - New mode of learning



**HRC, 1<sup>st</sup> student speaker at Wellesley graduation in 1969:  
“Fear is always with us, but we just don’t have time for it. Not now.”**

# COVID-19 perspectives: Use it or Lose It





# CONSIDER Dweck's Growth Mindset

- Can we can grieve for what we have lost to make room for what we can gain?
- Can we look at the silver linings of these disruptions?
- Can we use the challenges to improve ourselves or our current lives?
- Can we adopt a growth mindset to move forward?

# Mindset: a set of traits *which can be changed*



**PERSISTENCE AND RESILIENCE ARE KEY, CHOICEFUL FACTORS**



## Dweck: False growth mindset is saying:

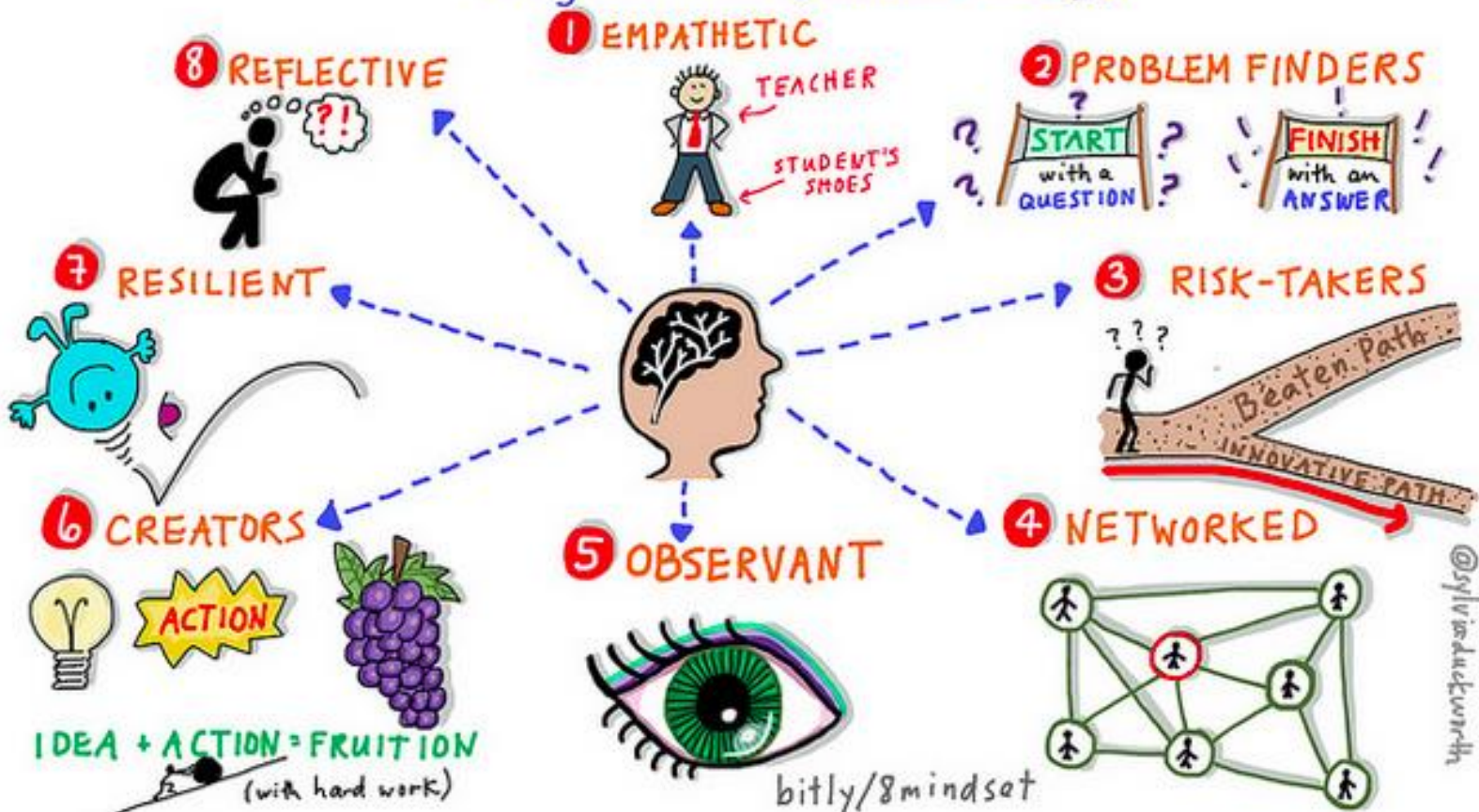
- you have growth mindset
  - when you don't really have it
  - or you don't really understand what it is.
- It's also false in the sense that
  - nobody has a growth mindset in everything all the time. Everyone is a mixture of fixed and growth mindsets.
- You could have a predominant growth mindset in an area
- but there can still be things that trigger you into a **fixed mindset trait** like
- **something really challenging and**
- **outside your comfort zone can trigger it**

# Fixed > Growth > Innovator's Mindset

## 8 Characteristics of the Innovator's Mindset

By George Couros @gcouros

The innovator's mindset: The belief that abilities, intelligence and talents are DEVELOPED, leading to the creation of BETTER ideas. 💡





# What Kind of Mindset Do I Want to Have During COVID-19?

Problem ?

Fixed Mindset



Growth Mindset



Innovation Mindset



Covid-19 is making people sick all over the world.

I am scared and worried about what is happening. It is out of my control.

I can stay well-informed about the situation to understand how it impacts on me and my family.

I can use the information I learn to make the most of this situation.

Schools are closed and children are learning from home.

I can't learn if I can't go to school.

I can keep learning if I put in the effort and stay motivated.

I have a unique opportunity to learn new skills and try something I've never done before.

We are all being asked to practice social distancing.

I have to stay indoors and do nothing.

I can find new ways to do things if I try.

Social distancing gives me the opportunity to help people do things differently.

We can't do activities in groups.

I can't see my friends or do fun activities with them.

I can stay connected with my friends if I put my mind to it.

I can help people stay connected using technology in innovative ways.

There are many problems caused by Covid-19.

The problems are too big for me to solve. I can't help.

I can help solve problems if I work hard and learn from others.

I can design a solution to a problem caused by Covid-19.



# Evolution to the innovation mindset

END Conference Zagreb 2020

## Problem

We can't do activities in groups.



## Fixed Mindset

I can't see my friends or do fun activities with them.



## Growth Mindset

I can stay connected with my friends if I put my mind to it.



## Innovation Mindset

I can help people stay connected using technology in innovative ways.



# Growth Mindset in Action

## Online Learning During Coronavirus



# Constant Changing of the Guard

- It seems that every generation has its struggle as the young come of age and challenge their elders for power
  - In your life, what struggles do you remember as you entered adulthood?
  - What did your parents complain about as you came of age? What did *their parents* complain about *them*?

# We've All Had This Experience

Teenager Post # 14468  
Parents have no idea  
what it's like growing up  
in this generation.

//[teenagerposts.tumblr.com](http://teenagerposts.tumblr.com)



Teenager Post # 947  
Parents call it "talking  
back". We call it  
"explaining".

[//teenagerposts.tumblr.com](https://teenagerposts.tumblr.com)

# How Are Generations Different?

- Generations can be defined by
  - Time periods
  - Critical, formative events
  - Contextual social shifts, world view
  - Signature achievements or innovations
  - Values, attitudes, preferences, other factors
  - *Defined differentially by various experts*

# Which Generation are You?

(\*age if still alive today as of 2019)

Generation Name	Births Start	Births End	Youngest Age Today*	Oldest Age Today*
The Lost Generation The Generation of 1914	1890	1915	104	129
<i>The Interbellum Generation</i>	<i>1901</i>	<i>1913</i>	<i>106</i>	<i>118</i>
The Greatest Generation	1910	1924	95	109
The Silent Generation	1925	1945	74	94
Baby Boomer Generation	1946	1964	55	73
Generation X (Baby Bust)	1965	1979	40	54
<i>Xennials</i>	<i>1975</i>	<i>1985</i>	<i>34</i>	<i>44</i>
Millennials Generation Y, Gen Next	1980	1994	25	39
iGen / Gen Z	1995	2012	7	24
Gen Alpha	2013	2025	1	6



# Different Names with Overlapping Time Periods

1900-1924 (or 1937)

- The Lost Generation, GI Generation, The Greatest Generation

*1901-1913 Interbellum (Intergenerations)*

1924 (or 1937)-1945

- Maturists, Veterans, Traditionalists, Silent Generation, Builders
- Similar variations in names and time spans are present for all generations

# Other Differences among Experts

- Baby Boomers span from
  - 1945-1960 (15 year window)
  - Pre 1963
  - 1946-1964 (18 year window)
- Similar variations in time frames and names of generations are evident
- Individuals can exhibit traits of two generations if close to cutoff years (Xennials between Gen X and Millennials)

# Another Framework of Names

## Common Generational Names in the U.S.



**late 90s to 2010s**  
Gen Z, iGen, or Centennials



**1980 to late 90s**  
Millennials or Generation Y



**1965 to 1979**  
Thirteeners or Generation X



**1900 to 1924**  
G.I. Generation



**1925 to 1945**  
Traditionalists or  
Silent Generation



**1946 to 1964**  
Baby Boomers

8 Areas of Generational Differences	<u>Traditionalists</u>	<i>Baby Boomers</i>	<u>Gen X</u>	<u>Millennials</u>
<u>1. Communication</u>	Formal	<i>Structured</i>	<b>Casual</b>	Fast
<u>2. Work Style</u>	By the book	<i>Whatever it takes</i>	<b>Efficient</b>	Goal-directed
<u>3. Work/ Life Balance</u>	Work & family separate	<i>Work comes first</i>	<b>Balance a must</b>	Blended Lifestyle
<u>4. Etiquette/ Grooming</u>	Formal	<i>Professional</i>	<b>Casual</b>	Relaxed
<u>5. Motivation/ Rewards</u>	Self motivated	<i>Career driven</i>	<b>Time off</b>	Public Praise
<u>6. Respect / Loyalty</u>	To the Organization	<i>To the Profession</i>	<b>To the Individual</b>	To Co-worker Friends
<u>7. Leadership</u>	Ultimate respect for Authority	<i>Respect for Power</i>	<b>Collaboration is Key</b>	Freedom is Key
<u>8. Technology</u>	"If it ain't broke, don't fix it."	<i>It's necessary progress</i>	<b>It's practical</b>	"Is there anything else?"

# Generational Exemplars

- **Lee Iacocca**, died 7/2/19 at 94 years old, GI Generation
- Bernie Sanders, 78 years old, Maturist, Traditionalist, Silent Gen, WWII, Veterans
- Hillary Clinton, 72 years old, Baby Boomer
- Oprah, 66 years old, Baby Boomer
- Bill Gates, 64 years old, Baby Boomer
- Barack Obama, 58 years old, Gen X
- Elon Musk, 48 years old, Gen X
- **Mark Zuckerberg**, 36 years old, Millennial

*Fig.1*  
**BUSINESS MAGNATE  
OF YESTERYEAR**

A bespoke suit demonstrates seriousness and good taste

A perfectly folded pocket square speaks of an attention to detail

**Lee Iacocca**

Both hands free for a firm handshake



Freshly shined shoes send a signal that you're not to be messed with

*Fig.2*  
**BUSINESS MAGNATE  
OF TODAY**

A CBGB T-shirt shows you weren't alive in the '70s

**Mark Zuckerberg**

"Mom jeans" suggest you rarely leave the house



Flip-flops send a signal that you're just messing around

# FUTURE IS A

## Generational Dress Codes

- Professional dress code in 2017
  - *Does level of formality indicate quality of professional attributes or capabilities?*
- Corporate “Fun Friday” dress code
  - Whose dress code counts as “informal?”



# Broad Generalities, No Absolutes















- Any one individual may not exhibit all characteristics of his/her group
- People may demonstrate some mixing of traits, especially if born during transitional years
- Experts vary in their time frames, etc.
- Contextual and situational experiences can influence traits



# Multigenerational Environments

- We now have up to 5 generations in the workforce, catering to the needs and wants of a 7+ generation world community
- How do we communicate across different perspectives, values, interaction styles, and even devices and technologies?

# Talking a different language

Formative experiences	<b>Maturists</b> (pre-1945) Wartime rationing Rock'n'roll Nuclear families Defined gender roles - particularly for women 	<b>Baby boomers</b> (1945-1960) Cold War 'Swinging Sixties' Moon landings Youth culture Woodstock Family-orientated 	<b>Generation X</b> (1961-1980) Fall of Berlin Wall Reagan/Gorbachev/ Thatcherism Live Aid Early mobile technology Divorce rate rises 	<b>Generation Y</b> (1981-1995) 9/11 terrorists attacks Social media Invasion of Iraq Reality TV Google Earth 	<b>Generation Z</b> (Born after 1995) Economic downturn Global warming Mobile devices Cloud computing Wiki-leaks 
Percentage in UK workforce	<b>3%</b>	<b>33%</b>	<b>35%</b>	<b>29%</b>	Employed in either part-time jobs or apprenticeships
Attitude toward career	Jobs for life 	Organisational - careers are defined by employees	"Portfolio" careers - loyal to profession, not to employer	Digital entrepreneurs - work "with" organisations	Multitaskers - will move seamlessly between organisations and "pop-up" businesses
Signature product	Automobile 	Television 	Personal computer 	Tablet/smartphone 	Google glass, 3-D printing
Communication media	Formal letter 	Telephone 	E-mail and text message 	Text or social media 	Hand-held communication devices
Preference when making financial decisions	Face-to-face meetings	Face-to-face ideally but increasingly will go online	Online - would prefer face-to-face if time permitting	Face-to-face	Solutions will be digitally crowd-sourced

Source: Barclays, University of Liverpool

Each generation in the workplace comes with its own sets of experiences and expectations that can occasionally come in conflict with one another

	<b>Traditionalist</b>	<b>Boomer</b>	<b>Gen X</b>	<b>Gen Yers</b>
<b>Training</b>	The hard way	Too much and I'll leave	Required to keep me	Continuous and expected
<b>Learning style</b>	Classroom	Facilitated	Independent	Collaborative & networked
<b>Communications style</b>	Top down	Guarded	Hub & Spoke	Collaborative
<b>Problem-solving</b>	Hierarchical	Horizontal	Independent	Collaborative
<b>Decision-making</b>	Seeks approval	Team informed	Team included	Team decided
<b>Leadership style</b>	Command & control	Get out of the way	Coach	Partner
<b>Feedback</b>	No news is good news	Once per year	Weekly/Daily	On demand
<b>Technology use</b>	Uncomfortable	Unsure	Unable to work without it	Unfathomable if not provided
<b>Job changing</b>	Sets me back	Sets me back	Necessary	Part of my daily routine

# Faculty and Students in Higher Ed

- After the Age Discrimination in Employment Act passed in the US in 1986, age based mandatory retirement was outlawed
- Weinberg and Scott (2013) predicted that over 60% of faculty expect to retire after age 70
- 15% expect to retire after age 80

# Given these differences...

- How do we work, teach and learn productively together?
- How do we in the increasingly aging academy teach the next generation?
- How can they best learn from us?
- How do we prepare for the students coming after them, Gen Z and Alpha?

# Lilianna Zyszkowski, Inventor

- At age 11 in 2012, when her grandfather ended up in the hospital after accidental overdose of his blood thinner, she invented [the Pill Minder](#) to track consumption
  - Found touch sensors in tv remote controls,
  - With help of online videos, figured out how to solder them to bottom of pill box
  - Connected each day's top lid to controller wires,
  - Read online how to program the opening of each day's lid to a twitter account
  - Twitter account notifies person's smartphone



# At 15, Her Big Vision was to Impact the Internet of Things



- Now she is working towards empowering young girls to learn to code and enter STEM and tech fields.
- She is an award-winning inventor, Internet of Things (IoT) pioneer, and advocate for early childhood STEM programs and the promotion of women in technology fields.

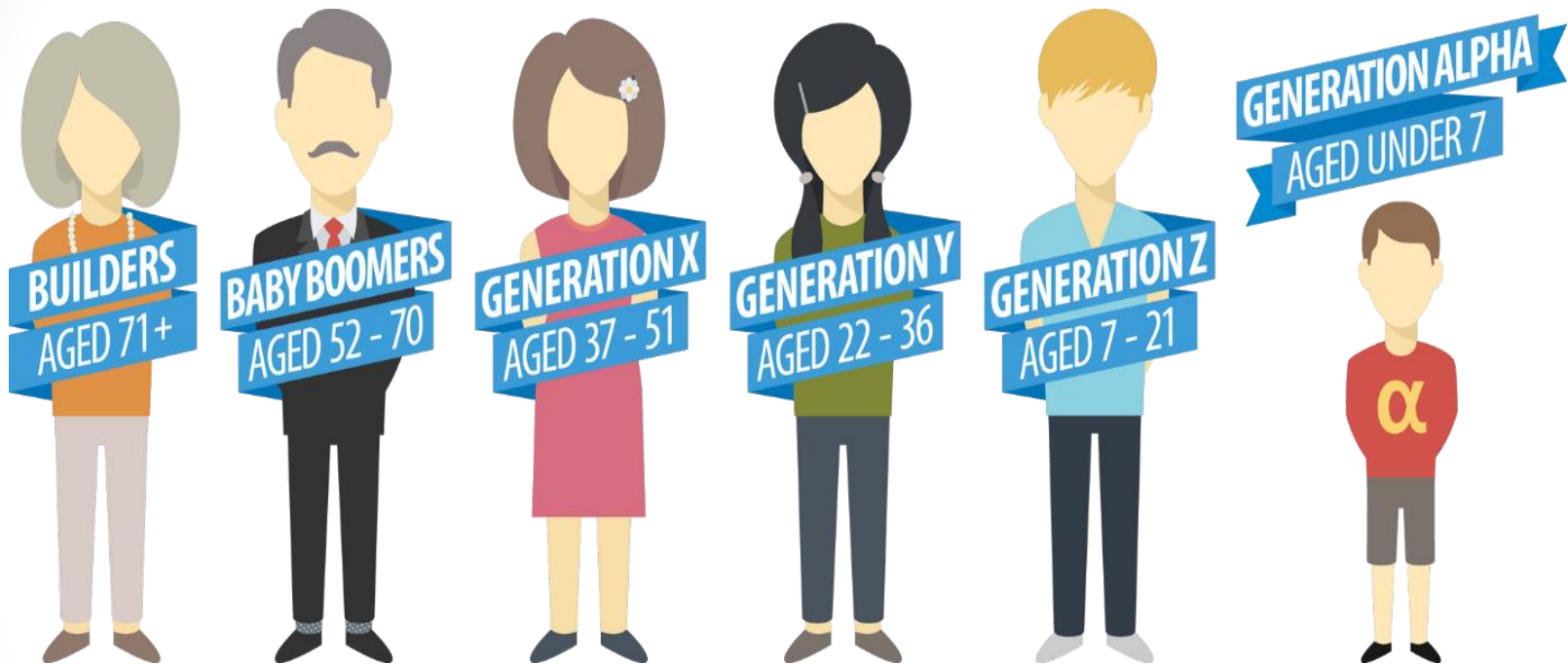


# Gen Z is changing the world

- Nick D'Aloisio at age 17 sold his Summly App, a news service app, to Yahoo for \$30 million in 2013 (born 11/1/95)
- His app revised any content into short paragraphs of about 400 words total
- Began writing algorithms at 15 in high school



# Preparing for the future



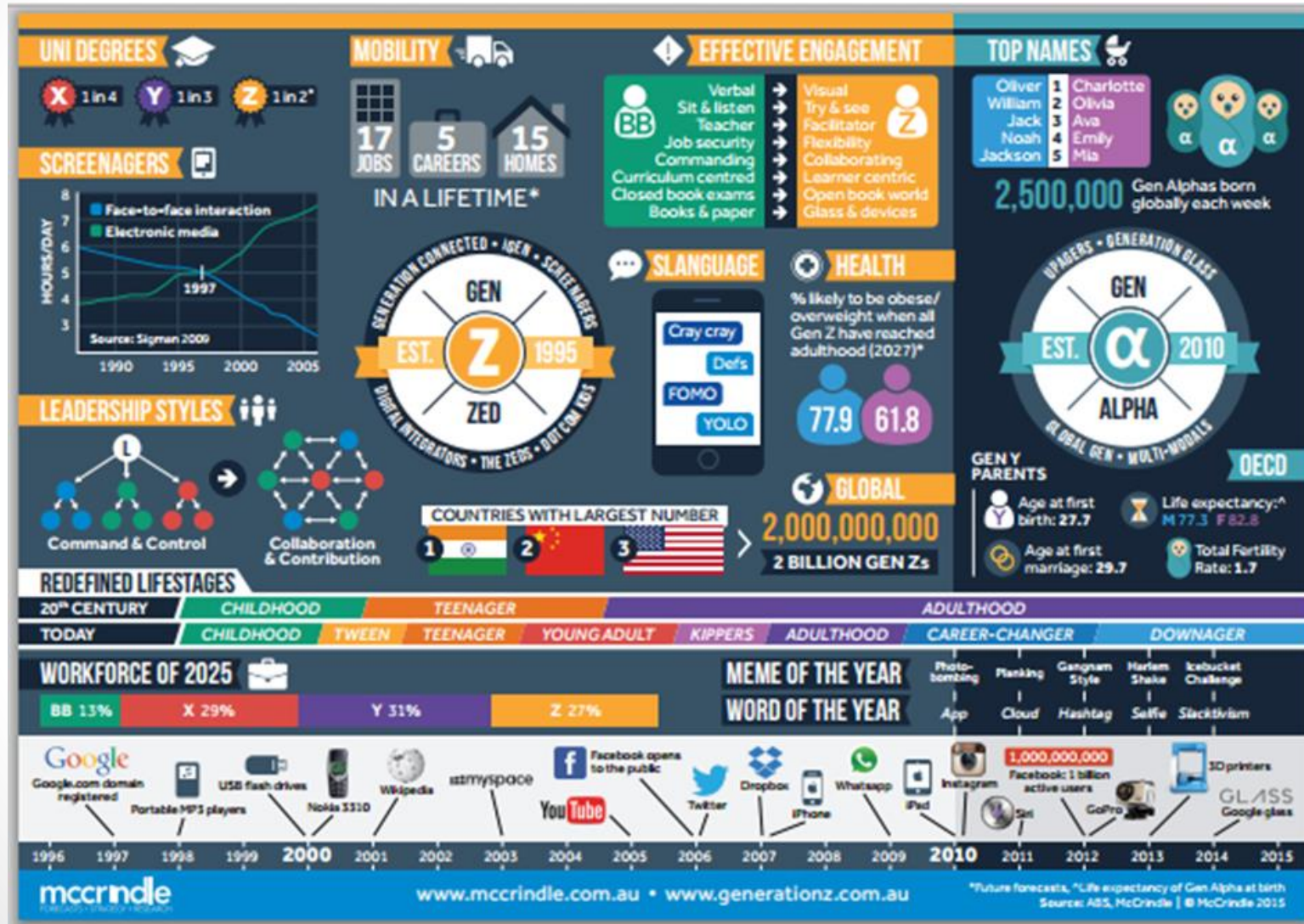
- The average employee in Australia changes jobs every 3 years
- Gen Alpha children need to be prepared for the likelihood of 17 jobs in their lifetimes.

# Generation Alpha, post 2020

- Babies are Skyping to their Grandmas across oceans in real time
- Born with tech as an embedded and ubiquitous parts of their lives



# Gen A and Gen Alpha Infographic



# On 4/12/17 did you hear about ...

- the 8 year old Ohio boy who learned how to drive from YouTube?
  - Parents came home, dad went to bed, and mom fell asleep watching tv with the kids
  - He and his sister were hungry and wanted a Big Mac
    - He went online, watched some YouTube videos on how to drive

# He drove dad's work van!

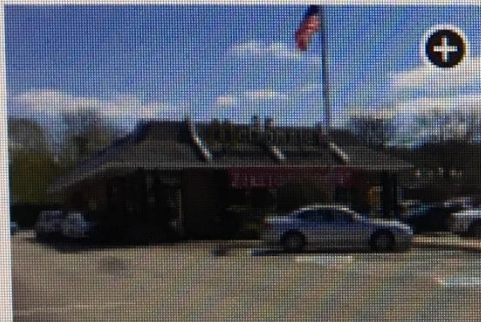
- He went to his piggy bank and got his money
- He got the keys to his dad's van and drove standing up about a mile to McDonald's
  - He drove through 4 intersections, made a few right hand turns, one left hand turn and crossed railroad tracks
- ***Safely***, and then they enjoyed their meals before the police came!

Police say the boy learned to drive from a You Tube video

## East Palestine Police: 8-year-old drives 4-year-old sister to get cheeseburger

Posted: Apr 12, 2017 6:17 AM PDT

Updated: Apr 18, 2017 5:07 AM PDT



EAST PALESTINE, Ohio - It wasn't a Big Mac attack, but a hankering for a cheeseburger that prompted an eight-year-old boy from East Palestine to get behind the wheel of his dad's van and drive to the local McDonald's with his 4-year-old sister.

East Palestine Police officer Jacob Koehler tells 21 News that the boy pulled up to the drive-thru window of the restaurant at around 8 p.m. Sunday after driving from his home where his parents were sleeping about a half mile away.

The boy just wanted to buy a cheeseburger at the Market Street restaurant, according to police.

"He looked up videos on YouTube on how to drive," said officer Koehler, who adds that witnesses say the boy followed the rules of the road, stopping for lights and keeping within speed limits.

The children did get to eat at McDonald's while they waited for their grandparents to pick them up.

No charges are being filed, according to Koehler.

0 Comments

Sort by Oldest ▼

# Generational Shifts

- One Boomer grandfather asked his daughter what to buy his 7 year-old grandson
- Her Gen Y/Millennial response was that the boy would like
  - a cell phone
  - a drone
- Neither of which Grandpa wanted to get

# Generational Naming Outside of the United States

- While the concept of social generations is a largely Western notion, generational naming is not unique to this region.
- Other nations name their generations too, though these are most often influenced by local or regional events and less by unofficial social and cultural zeitgeists.
- In South Africa, for example, people born after the end of apartheid in 1994 are referred to as the Born-Free Generation.
- Romanians born after the collapse of communism in 1989 are sometimes called the Revolution Generation.



# Change is Coming

- Change is fast approaching the academy, as well as every other part of the world and our lives
- How do we adapt?



# Academia Adapting to Change

- We need to get online more by
  - Offering more online courses
  - Offering more online communication
  - Offering more on-demand, mobile services
- We need to adopt technology that our students embrace

Years  
Ages  
Major Events  
Major Traits

## GI GENERATION

Born before  
1936

76+

WORLD WAR II  
.....  
GREAT  
DEPRESSION

FORMALITY  
.....  
UNIFORMITY  
.....  
COOPERATIVE  
.....  
PUBLIC INTEREST  
OVER PERSONAL  
GAIN

## SILENT GENERATION

1937-1945

67-75

WORLD WAR II  
.....  
GREAT  
DEPRESSION  
.....  
ADVENT OF TV,  
TELEPHONES

RESPECT FOR  
AUTHORITY  
.....  
LOYAL  
.....  
HARD WORK

## BABY BOOMERS

1946-1964

48-66

CIVIL RIGHTS  
.....  
WOMEN'S  
LIBERATION  
.....  
COLD WAR

EXPLORE  
.....  
OPTIMISTIC  
.....  
WORK-CENTRIC

## GENERATION X

1965-1976

36-47

VIETNAM  
.....  
WATERGATE  
.....  
ADVENT OF MTV

INDIVIDUALISTIC  
.....  
FLEXIBLE  
.....  
SKEPTICAL OF  
AUTHORITY

## MILLENNIAL GENERATION

1977-1993

19-35

AIDS  
.....  
TECHNOLOGY

TECH-  
COMFORTABLE  
.....  
FAMILY-CENTRIC  
.....  
OPTIMISTIC

## GENERATION Z

1994-

18  
and younger

9/11  
.....  
IRAQ/  
AFGHANISTAN  
WARS  
.....  
MARKET CRASH

MISTRUST IN  
POLITICAL  
SYSTEMS  
.....  
ALWAYS  
CONNECTED  
.....  
MULTI-TASKERS

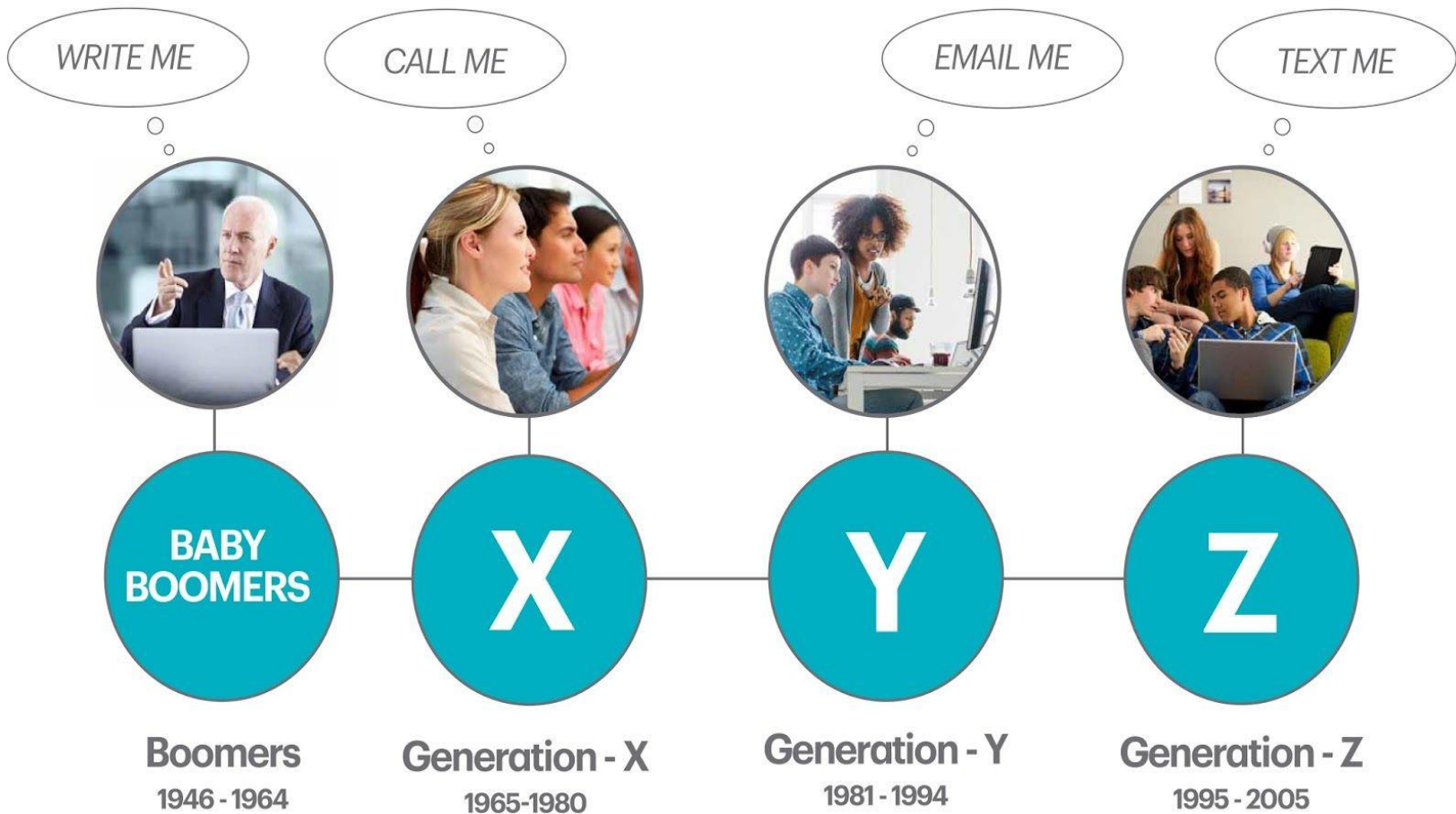
# Needed 21<sup>st</sup> Century Skills

- We must prepare students with 21<sup>st</sup> century skills (National Education Association, 2012; National Research Council, 2012) for work and school arenas where:
- Critical Thinking skills are in high demand along with problem solving abilities
- Collaboration is common practice with expected proficiencies
- Communication across cultural boundaries is standard practice in the flat world
- Creativity is encouraged and rewarded though separate skillsets, they often overlap

# Learning Styles

Boomers Me Generation	Gen X Lost Generation	Gen Y/N Millenials/Nexters
<ul style="list-style-type: none"><li>•Linear fashion</li><li>•Accept objectives</li><li>•Struggle with simulation</li></ul>	<ul style="list-style-type: none"><li>•Appreciate new technology</li><li>•Expect interactivity</li><li>•Want to test out of something they know</li><li>•Want choices</li><li>•Want to learn what's needed <i>now</i></li></ul>	<ul style="list-style-type: none"><li>•Freeform</li><li>•Take a test and figure out what they don't know and focus on that</li><li>•Want to choose path of navigation</li><li>•Independent yet learn through social interactions</li><li>•Assertive information seekers</li></ul>

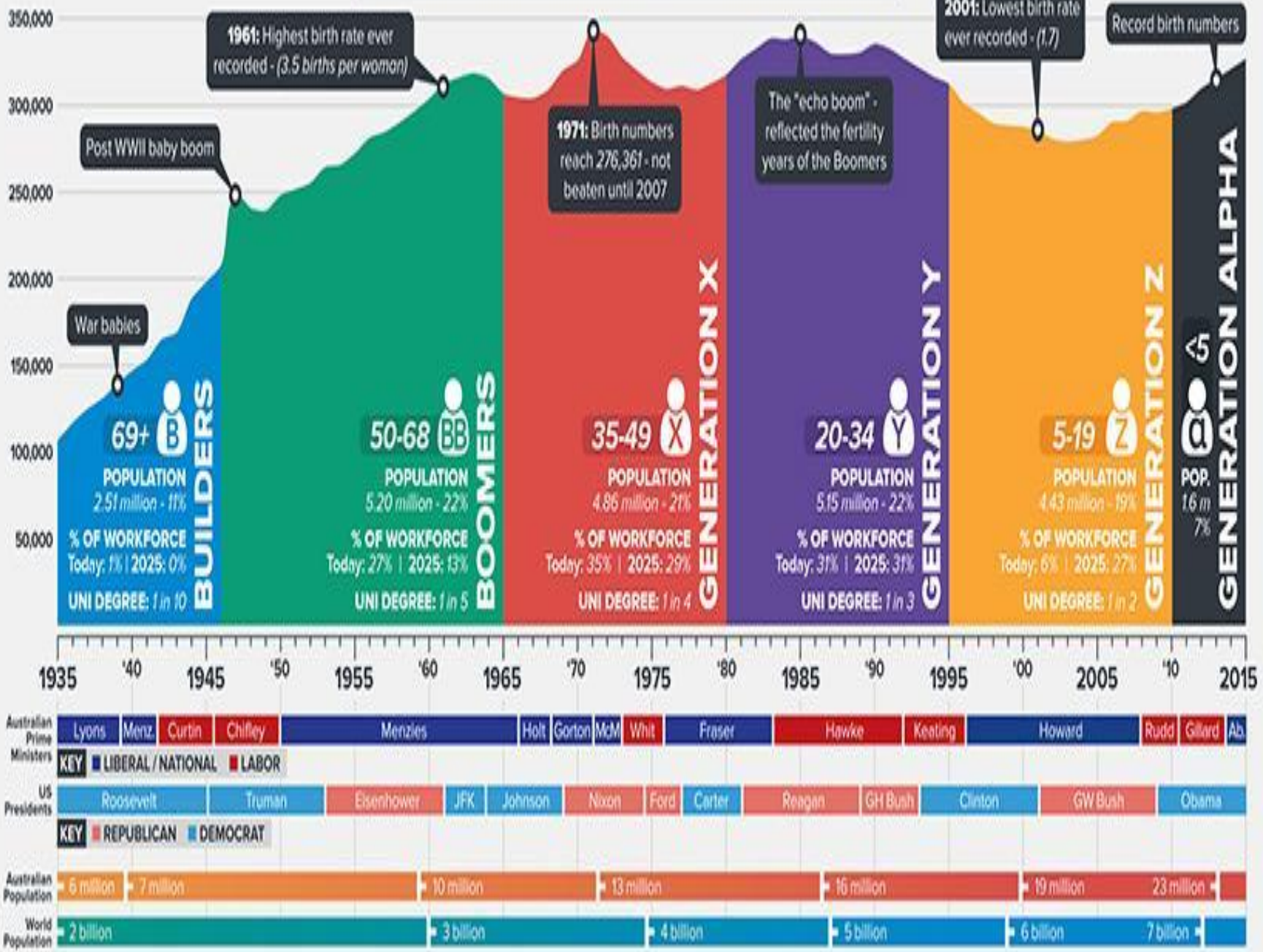
From "How to Design E-Learning for Multiple Generations" by Sarah Boehle, *ManageSmarter*, February 19, 2008; and "Teaching and Learning with the Net Generation" by Cassandra Barnes, Raymond C. Marateo, and S. Pixy Ferris, in *Innovate*



## Diversity in the Work Force

- Communication styles
- Technology preferences
- Timeline expectations

# POPULATION BY YEAR OF BIRTH







# Some Old Skills, Some New Ones

- Besides needing highly proficient teaching and communication skills, professors for online students would also need
  - Strong command of tech tools/applications
  - Strategies to ensure academic integrity
  - Knowledge of specific pedagogy to serve in online milieu (Flanagan, 2012)



# New Bells and Whistles

- Many online Learning Management Systems like Blackboard offer multiple means of student engagement
  - Live video/audio class sessions
  - Asynchronous dialoguing
  - Group announcements and emails
  - Chatrooms, Shared Whiteboards, small group breakout rooms

# Tech Resources and Tools

- YouTube
- Zoom video conferencing
- Text messaging
- Skype
- FaceTime Contact Information
- Phone calls
- Virtual and Augmented Reality
- other

# Some Do's

- Teach and empower students to be proficient with the 21<sup>st</sup> century skills
- Teach them how to think critically, create, collaborate, communicate and find new solutions
- Provide short, succinct, clear, relevant learning modules

# Some Don'ts

- Don't lecture
- Don't demand rote memorization of facts (drill and kill/regurgitate)
- Don't overload with information and details that can be easily accessed on cloud storage
- Don't require irrelevant filler activity

# Learning Preferences Survey

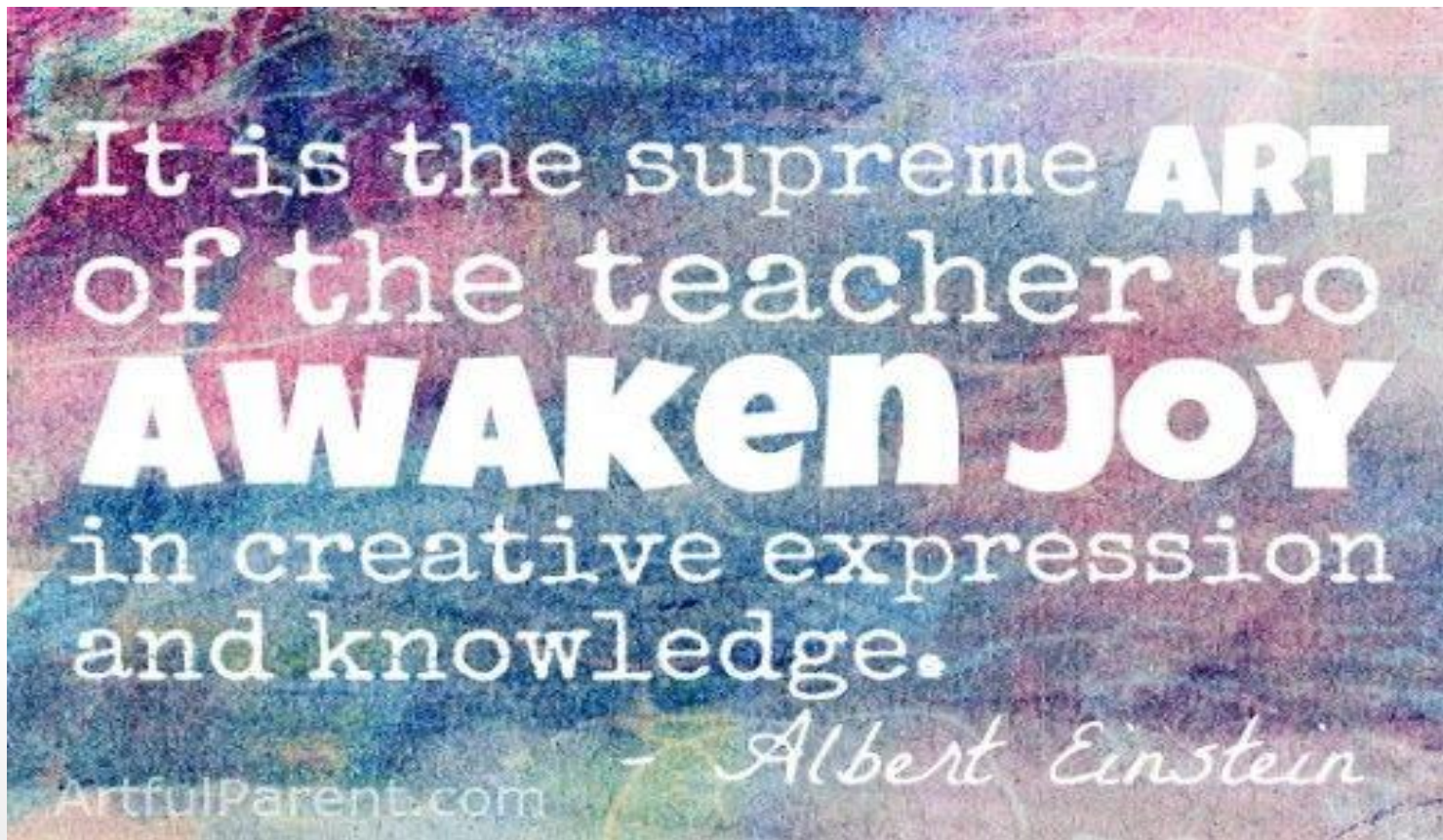
- Hetherington (2017) discussed how people like to learn
- Mostly self-paced, at home, on computers
  - Rather than on printed paper, tablets or mobile phones
- In short duration of 16 to 30 minute sessions
- Tech instructional designer, 5 minutes max
- Content that can be applied or practiced immediately with feedback or self assessment

# DO

- Teach to the whole person
  - Mental, emotional and spiritual
- Prepare students for the unknown, emergent future
  - Encourage and model a growth mindset
- Remain flexible and open to technological innovation in teaching and learning

# Final Thoughts

- Keep a growth mindset
- Connect with people
  - Have fun





# THANK YOU KINDLY

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