A New Engineering Education for a New Era
Improving our student's learning by adapting our teaching methodologies to the Generation Z

Uriel Cukierman
Agenda

- A Little of who I am
- An introduction to the term Gen Z and its meaning
- We are teaching, are they learning?
- Challenges we are facing ahead
- Clues to follow up
- Spoiler alert: There are no magical solutions!!

Thank you for participating!!
A Little of who I am

• Professor in the Information Systems Engineering Department at the Universidad Tecnológica Nacional (UTN) in Argentina
• Director of the Center for Educational Research and Innovation at UTN
• Associate Director at InnovaHiEd
• VP of Capacity Building and Former President of IFEES
• Research Professor at the University of New Mexico, USA
• Honorary Professor at the Universidad Ricardo Palma in Lima, Peru
• International Engineering Educator Honoris Causa by IGIP (Austria).
What does Generation Z mean?

- The Merriam-Webster Online Dictionary describes Generation Z as generation of **people born in the late 1990s and early 2000s**
- Statistics Canada defines Generation Z as **starting from the birth year 1993**
- The American Psychological Association **starts Generation Z at 1997**
- Forbes defines Generation Z as **people born from the mid-1990s to the early 2000s**
- In summary, we may agree that **we are speaking about people under 25 years old (our students)**
Generations are shaped by the context in which they emerged

Today’s young people differ from yesterday’s.

- **B**: Baby boomer 1940–59
  - Postwar
  - Dictatorship and repression in Brazil

- **X**: Gen X 1960–79
  - Political transition
  - Capitalism and meritocracy dominate

- **Y**: Gen Y (millennial) 1980–94
  - Globalization
  - Economic stability
  - Emergence of internet

- **Z**: Gen Z 1995–2010
  - Mobility and multiple realities
  - Social networks
  - Digital natives
We have to acknowledge that...

- Digital immigrants
- Competitive
- Individualistic
- Rules established by parents

Gen X

- “Tecnoholics”
- “Communaholics”
- Career multitaskers
- Do what’s right

Gen Z
THE FUTURE HAS ARRIVED
ARE YOU READY FOR GEN Z?

Gen Z could represent 20 percent of the workforce by 2020. As organizations welcome these digital natives, they must bridge the deepening digital divide across multiple generations in the workplace.

Dell Technologies surveyed 12,000 high school and college students from around the globe about their views on technology and future careers.

Ages 16-23: 12,086 Gen Z students surveyed

Global perspective: 17 countries represented

Work experience: 83% have some exposure to jobs
What does this survey say about their education?

98% • have used technology as part of their formal education

(only) 57% • rank their education as good or excellent at preparing them for their future career

(only) 50% • want the ability to learn new skills and have new experiences

75% • expect to learn on the job from coworkers or other people – not online
We are teaching, are they learning?

I taught Stripe how to whistle.

I don't hear him whistling.

I said I taught him. I didn't say he learned it.
Go to www.menti.com and use the code 34 74 12

Answer the following questions based on what you are actually doing and not on what you think you should do.

- Are you teaching as you have been taught? 2.5
- Are you addressing the characteristics of these students? 2.6
- Have you recently updated your teaching methods? 3.4
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Which of these images best resembles your own classroom?

Option 1

Option 2

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We need to update our current conservative institutional practices according to the new internal and external demands.
We need to transform our classrooms from typical crowded lecture rooms to flexible learning spaces.
We need to learn how to improve our students’ learning applying new methodologies and technologies.
Students need to understand and be active participants of these changes

They may be your most important allies!!
The most important skill our student should develop
“Learn to learn”
Some very good references that can help you
Thank you!!
Your questions and comments are welcomed

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