Our world has changed.

Why is educational transformation necessary TODAY?
Increasing demand for higher education
Increasing worldwide demand for higher education:

1960: 13 million

51 years

14X

2011: 183 million
Increasing worldwide demand for higher education:

2008: 17 million

27 years

2025: +262 million

15X
The “atypical” student is the new “normal”
They have family, children or are single parents

Average 24 years

Full-time jobs + part-time studies

Usually don’t go to college right after high school

Economically independent
Student inability to apply what he or she has learned to real-life situations
Students develop individual skills and learn the concepts, but can’t apply them in complex situations out of the classroom.
Discrepancy between universities and the labor market
Discrepancy between universities and the labor market

- 72% of colleges and universities in the world think that their graduates are adequately prepared for the labour market

- By comparison
  - Only 42% of businesses agree
  - Only 44% of students agree

Stakeholders hold different views about the readiness of graduates for the job market

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Agreement that graduates/new hires are adequately prepared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employers¹</td>
<td>42%</td>
</tr>
<tr>
<td>Providers²</td>
<td>72%</td>
</tr>
<tr>
<td>Youth³</td>
<td>45%</td>
</tr>
</tbody>
</table>

McKinsey & Company 2012
Higher cost and lower "perceived" value of university
“Many degrees are a waste of money. The return of higher education would be much better if it were cheaper.”

“The phrase –the best investment is a good education– is increasingly questioned.”

“Some politicians, high-profile entrepreneurs and even educators are publicly skeptical of the value of a degree that costs hundreds of thousands of dollars.”
However it is a “perceived” value

2013 – Americans with college degrees earn more than 98% than those who do not. Increasing discrepancy…

Labor Department statistics by the Economic Policy Institute
Future: The Fourth Industrial Revolution will bring job losses
New jobs will be created, some of them hard to imagine.
Higher education is more important than ever.
Tec21 Educational Model

Leadership | Entrepreneurial Spirit | Social Responsibility | International Competitiveness

Transversal and Disciplinary Competencies

- Challenge Based Learning
- Flexibility
- Memorable University Experience
- Inspiring Professors
Based on challenges for competencies development

Challenge Based Learning

- Challenge Based Learning
- Flexibility
- Memorable University Experience
- Inspiring Professors

Student

Challenges

Environment

Professor
Now… Linear approach
Tec21... Pathways

Entry areas and associated degrees
Our world is changing. It is becoming more complex and challenging. We need to adapt to new volatile environments.
The challenges that executives are facing are rapidly changing. The methods we use to develop them must change too.
Preparing for a VUCA world
Volatile, Uncertain, Complex, and Ambiguous

“There are no boundaries anymore”

Jeff Barnes
Head of Global Leadership, General Electric
Volatile: economic conditions and a world where change happens rapidly and on a large scale
Uncertain: future that cannot be predicted with precision
Complex: scenarios and challenges driven by revolutionary new technologies
“47% of all US jobs could be lost to automation in the next two decades”

Ambiguous: an extremely dynamic climate where there is little clarity on what events mean and what effect they may have
Dealing with Ambiguity: 
The New Business Imperative 
Problems ---> Dilemmas
Identification of threats and opportunities in educational innovation
Observatory of Educational Innovation

A weekly report of curated media with the most relevant articles on education, technology and innovation designed for academics.

Brief reports on education and innovation issues, events and interviews with key experts and leaders.

In-depth analysis of educational trends with the highest potential to impact higher education.

http://observatory.itesm.mx/subscribe
4th International Conference of Educational Innovation, 2017
Designing the Future of Education

www.ciie.mx

11-13th december, in MONTERREY

Topics:
- Educational Trends
- Technologies for Education
- Management of Educational Innovation
- Educational Entrepreneurship
- Academic Innovation of Health
Identification of threats and opportunities in educational innovation

Experimentation with the launching and operation of new pilots that let us find out how education will be like in 2030
Identification of threats and opportunities in educational innovation

Experimentation with the launching and operation of new pilots that let us find out how education will be like in 2030

Measuring the Impact of the educational innovation projects:

- Value processes (top down)
- Professors (bottom up)
Criteria

- Learning outcomes
- Nature of innovation
- Institutional alignment
- Growth Potential
- Financial viability

Trends in 2030 for higher education
The end of the university monopoly
End of the university monopoly: credentials

“Increased emphasis on certificates or badges obtained from online courses or workshops, even for university graduates.”

“Employers will place more value on on-the-job learning such as work placements and on demand continuing education in the workplace. Portfolios are becoming more important than CVs.”

The Future of Jobs and Jobs Training, Pew Research Center
“PwC will allow high school graduates to work as accountants and risk management consultants directly after high school. At least five other companies plan to do the same.”
The end of the university monopoly means less cost and shorter program length

• Without the historical burden of staff and faculty, startups can bring together an ad hoc team at a lower cost.

• Startups will be able to continue ‘unbundling' the university into less costly providers of content units, supervising students and issuing credentials and badges.

The Future of Jobs and Jobs Training, Pew Research Center
New technologies change the way we learn
AI in education: adaptive learning, chatbots

Virtual Reality and Augmented Reality: empathy and the possibility of superimposing a layer of information to reality

Big Data, educational data mining, learning analytics

Neurocognition: learning about how we learn
More flexibility and personalization
More flexibility and personalization

- Students have greater freedom to decide the place, time and space to learn
- "Just-in-time" learning
- Self-paced learning
- Curricular pathways and increasingly personalized content
- Possibility of alternating between studies and the labour market throughout life
Experiential learning
Why experiential learning?

- Speeds up learning
- Bridges the gap between theory and practice
- Produces attitude changes (soft skills)
- Increases engagement levels
- Enables custom learning
- Places learning outside the classroom
Diversification of teacher roles
The teacher's role transition

From “sage on the stage” to nearby “guide”
Unbundling teacher roles

It involves teamwork. The solo teacher no longer has complete control over these tasks:

- Development of the curriculum
- Curation and selection of course materials
- Information delivery
- Interaction with students
- Designing homework and assessments

- Evaluate student performance
- Monitor student success
- Mentoring students with learning difficulties
- Provide academic counselling
- Conduct research

Matthew Prineas | Vice Provost and Dean of The Undergraduate School, University of Maryland University College
The rise of the humanities
How do we prepare for an automated future?

Learning to learn: being able to reinvent oneself

Digital literacy: it is the basis of lifelong learning. In addition, it allows us to separate facts from fiction (to avoid "fake news")

Skills that are not easy to replicate with a machine: creativity, critical thinking, emotional intelligence, adaptability and collaboration
Two prevalent educational models

1. Similar to liberal arts, it involves a strong initial investment in learning how to learn. Later on, you will only need a small "recharge" with each new career.

2. It is similar to the traditional technical education. With a lighter initial investment to be “ready for work.” However, it will require more time and commitment with each new career.
New trends and technologies for Executive Development

Executives preparing for a VUCA world
Artificial Intelligence and Authentic Leadership

“When you press the pause button on a machine, it stops. But when you press the pause button on human beings, they start.”

Dov Seidman
CEO of LRN
AI will soon be able to do most of the administrative tasks of managers
Embracing Artificial Intelligence

Leave these tasks to AI… and focus on the interpersonal skills to remain relevant. Be more HUMAN and AUTHENTIC

Source: Accenture survey of 1770 frontline, mid-level, and executive-level managers from 14 countries
Cognitive readiness

“While critical thinking has remained a key focus for leadership development, the fact that cognitive readiness has also emerged as a top area for development clearly reflects the changing world that organizations are operating in”

Karen Chiang
Vice president, emerging markets, Talent Assessment at Pearson
Cognitive readiness

• In a VUCA world one of the competencies that leaders need to develop is Cognitive Readiness

• Cognitive readiness is the mental, emotional, and interpersonal preparedness for uncertainty and risk

• The new challenge for organizations will be to instill these skills into all levels of the organization
Critical thinking + Cognitive readiness

Critical Thinking competencies
- Strategic thinking
- Creative thinking
- Problem-solving
- Decision-making

Cognitive Readiness competencies
- Mental cognition
- Attentional control
- Sensemaking
- Intuition
- Problem-solving
- Adaptability
- Communication

Uncertainty and risk
Purpose and depth

“The way we’re working isn’t working”

Christine Porath and Tony Schwartz
The Energy Project
Millennials want purpose over paychecks. So why can't we find it at work?

Companies and employees could both benefit from collectively creating a meaningful work culture for millennials.
Why Finding Meaning At Work Is More Important Than Feeling Happy

Get off the monotonous treadmill of your job, and seek a different running path of meaning on your journey toward career satisfaction.
Purpose and depth

• People are starting to search for greater meaning through work

• In this creative era we wonder what it all means, what is a career, and why am I doing this work?

• To respond to this new challenges, executive education should focus on more reflection and clarity on the meaning of work

• A new view of work as a contribution to our spiritual life
A new definition of “executive”

“What we’re seeing now appears to be an actual shift in style and direction. We’re looking for people who are not placing themselves in center of universe.”

Jeffrey Sonnenfeld
Professor of Leadership Practice
Yale School of Management
A New definition of “executive”

- Nowadays, people from **many fields** are starting to look for executive education programs
- **New generations** entering the workplace and the interconnectedness of today’s world result in new business communities with specific needs
- Artists, doctors, scientists, designers and other professionals need more and more to start their own businesses and they need to know **how can they convert the skills they have learned into business-related skills**
Stewart Butterfield, Slack CEO
Individual development

“People develop fastest when they feel responsible for their own progress”

Nick Petrie

“Future Trends in Leadership Development”
Center for Creative Leadership
Individual development

• A change of focus from HR/companies owning the development to each person owns their development

• People’s motivation is highest when they feel a sense of autonomy over their own development

• We must democratize executive development to all staff
Vertical development

“Organizations have grown skilled at developing individual leader competencies, but have mostly ignored the challenge of transforming their leader’s mindset from one level to the next”

John McGuire and Gary Rhodes
Center for Creative Leadership
Horizontal development
(The skills “to do the job”)

• New skills and competencies
• New content
• Learning new skills to respond to what needs to be done today

Vertical development
(How to function at increasing levels of leadership)

• Personal skills to cope with the rapidly changing environment
• Challenging old assumptions
• Testing new assumptions
• Learning new skills to adapt to what leadership will be like in the future
Collective leadership

“Some of the most important innovations of coming decades will not be new technologies, but new ways of working together that are made possible by these new technologies”

Thomas Malone Patrick J. McGovern
Professor of Management
MIT Sloan School of Management
Collective leadership

- The **decline** of the **heroic** leader paradigm vs. the **rise** of **collective** leadership
- The complex, **chaotic future** that awaits us is **less suited to** the **loner leader**
- Rather than authority figures, we need distributed efforts and create **networks of interdisciplinary leadership**
Blended Learning

“Executives and global leaders are juggling the demands of high-level work, family life, and a rigorous business school program. By marrying traditional classroom instruction with online learning, we’re able to meet the needs of today’s executive education.”

Melanie Weaver Barnett
Ross School of Business
Chief Executive Education Officer
Blended Learning

- We are living blended-technology-driven lives
- Nowadays learning can happen anywhere at anytime and at several platforms, places and mediums
- This means that executive education programs must have blended-flexible options that combine face-to-face and virtual approaches
Virtual coaching & mentoring

• As our lives become increasingly automated and we rely more on online interactions, the future of coaching and mentoring will definitely be remote.

• **Shorter** coaching times and **remote** coaching sessions are cost effective and much more accessible.

• Organizations are starting to choose **customized cohorts** so people can learn around people they admire and follow.
Immersive programs

“Within one hour, people will have forgotten an average of 50% of the information presented. Within 24 hours, they have forgotten an average of 70% of new information, and within a month, 90% of it.”

Hermann Ebbinghaus
Theory of the “Forgetting Curve”
Immersive programs

• The boom of coding bootcamps, an alternative education model that offers fast-track, high-impact courses with promising job placement guarantee, is arriving to executive education programs

• Institutions like Stanford and Northwestern are now offering immersive programs and bootcamps with real-world insights and experiences for business leaders

• Immersive programs combine structured and informal learning environments
Education is at a historical inflexion point

Education is revolutionizing
• **Identification** of threats and opportunities in educational innovation

• **Experimentation** with the launching and operation of new **pilots** that let us find out how **education** will be like in **2030**

• **Measuring the Impact** of the educational innovation projects:
  - **Value processes** (top down)
  - **Professors** (bottom up)
Imagine the most brilliant minds

In service of transitioning towards a knowledge economy

Reinventing higher education

TECPRIZE
The Great Prize of Educational Innovation
1. IMAGINE
   Visualize preferred futures and define a moonshot

2. REINVENT
   Attract the most brilliant minds and propose solutions

3. EXECUTE
   Validate globally the most promising solutions and ensure impact
1. IMAGINE

★ Global competition: Sci-Fi #2049
  ○ Best short film
  ○ Best comic
  ○ Best short story

★ US $20k for the winners

★ Creatives
★ Visionaries
★ Storytellers

In partnership with Santander

VILLENEUVE, Denis. 2017. Blade Runner 2049

tecprize.org
New trends and technologies for Executive Development

José Escamilla de los Santos
TecLabs
jose.escamilla@itesm.mx