



Stamenka
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Sir John Daniel

Keynote

Dallas, 24-25

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*Mind the skills gap:
arming students with the skills
they need to own tomorrow*

The logo features a large, thick red circle. A horizontal blue bar with a slight 3D effect passes through the center of the circle. The words "MIND THE GAP" are written in white, bold, sans-serif capital letters across the blue bar. The entire graphic is set against a white background with thin yellow horizontal bars at the top and bottom.

MIND THE GAP

**The
Economist**

APRIL 27th–MAY 3rd 2013

economist.com

Britain's shaky economy

Time to scrap affirmative action

Bjorn Kjos, the Viking Stelios

Iran's fake messiahs

Criminal bumblebees

Generation jobless

**The global rise of
youth unemployment**



Idle hands

1

Youth unemployment and inactivity*

By region†, 2012 or latest, m



Sources: OECD; World Bank; *The Economist*

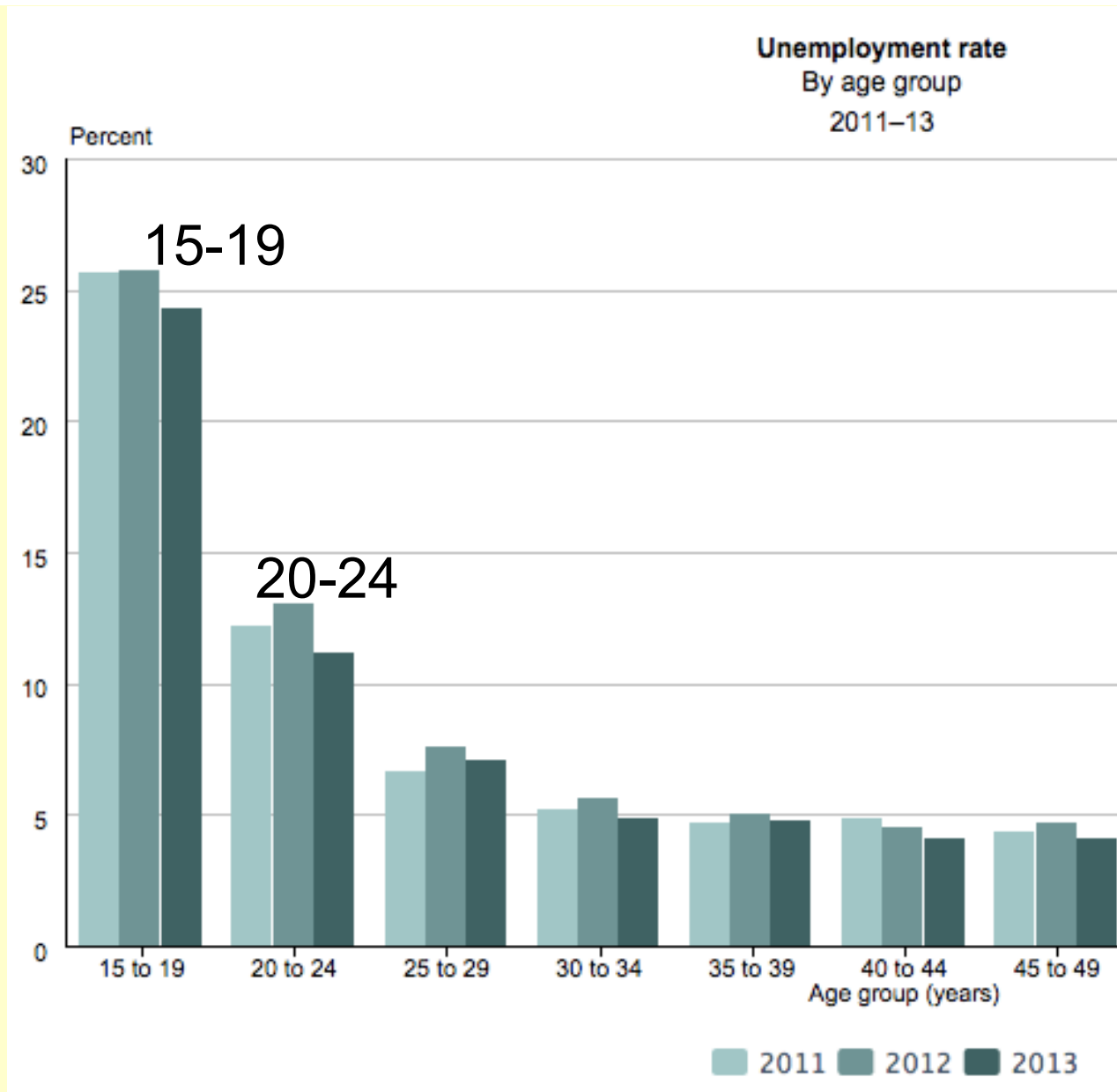
*15-24 year olds not in education

†Regions exclude OECD countries

‡Not in education or training

Country	2010 Youth unemployment %	2013 Youth Unemployment %	Change
United Arab Emirates	9.8	9.9	UP
China	9.0	10.1	UP
France	22.6	23.7	UP
United States	18.7	15.8	DOWN
United Kingdom	19.6	20.3	UP
Saudi Arabia	29.8	28.7	DOWN

Source: World Bank & International Labour Office

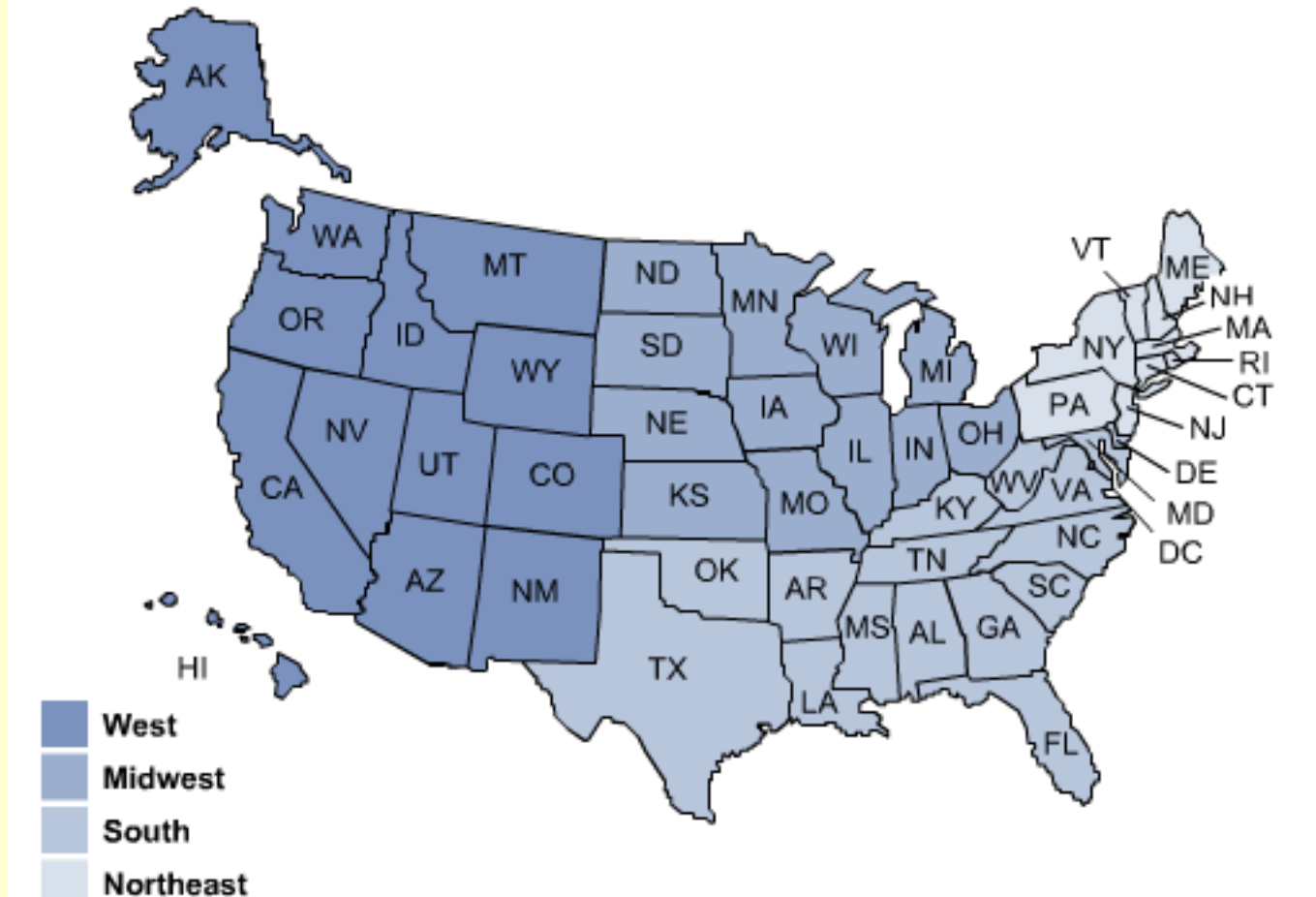


Unemployment by age group NZ 2013

China's Graduates Face Glut

Mismatch Between Their Skills, Job Market's Needs Results in Underemployment





Graduate underemployment:
2001 = 34%; 2012 = 44%

Education for the work available

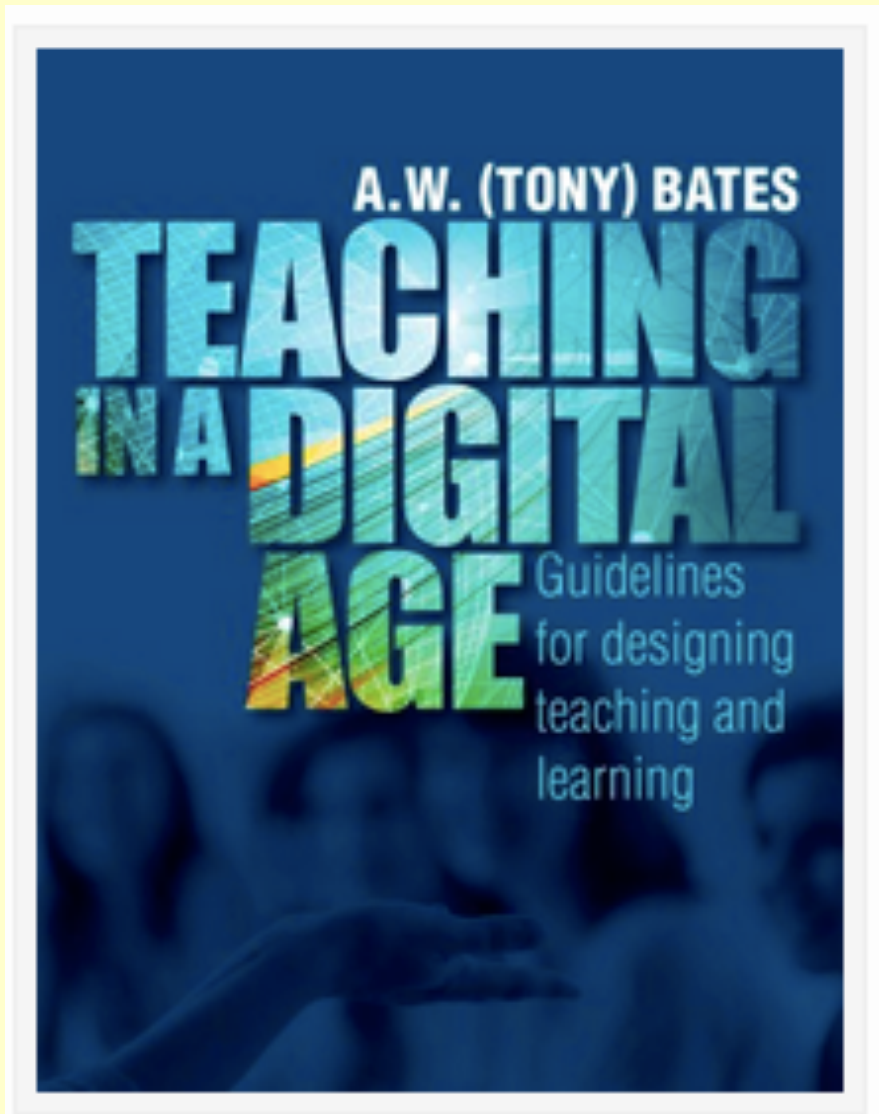
- Study different things?
- Studying harder?
- Performing better?

Driving the Skills Agenda: Preparing Students for the Future.

Top five skills sought by employers:

- Problem solving
 - Team working
 - Critical thinking
 - Creativity
 - Leadership
-
- Literacy
 - Numeracy





Tony Bates



The Conference Board of
Canada

- communication skills (including social media)
- ability to learn independently
- ethics and responsibility
- teamwork and flexibility
- thinking skills
- digital skills
- knowledge management

Bates A.W. (2015) *Teaching in a Digital Age*

**‘skills mostly need to be
embedded within a
knowledge domain,
developing them is often
context specific’**

Content knowledge

- can be transmitted equally effectively through a wide range of media

Skills development

- more tied to specific teaching approaches and technologies

Knowledge

- Based on direct personal experience
- Academic knowledge

Knowledge

- Based on direct personal experience
- Academic knowledge
 - 'a second-order form of knowledge that seeks abstractions and generalisations based on reasoning and evidence'

Laurillard, 2001

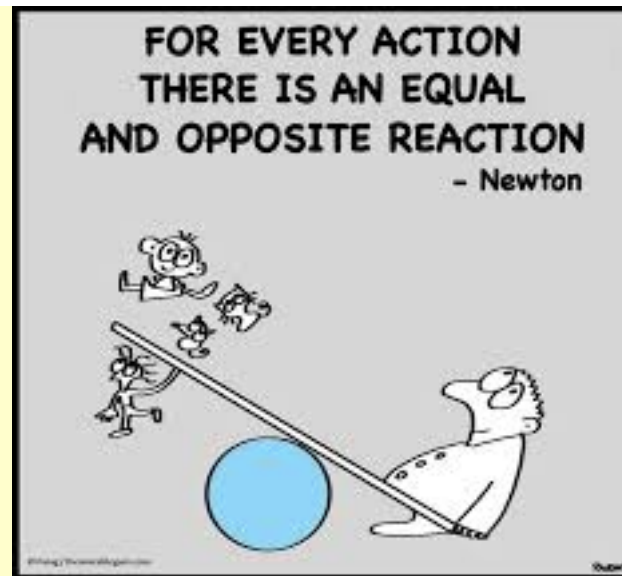


By Frits Ahlefeldt

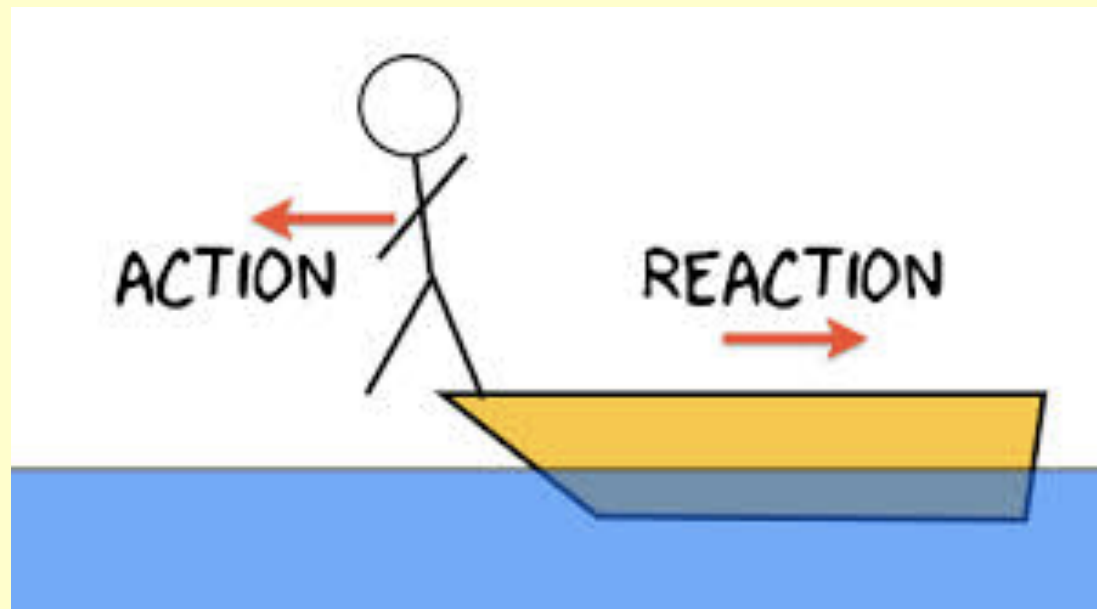
Academic Knowledge:

- Transparency
- Codification
- Reproduction
- Communicability

‘a role of university
teaching is to mediate
between students’
experience and its
symbolic
representation’



Newton's Third Law of Motion



Arming students with the skills they need to own tomorrow:

- Subject content (work-related)
- Academic knowledge of content
- Skills embedded in knowledge domain

‘We cannot expect students to
construct academic
knowledge simply through
independent study or
discussion with their peers’

Laurillard, 2001

Arming students with the skills they need to own tomorrow:

- Subject content (work-related)
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HOW CAN TECHNOLOGY HELP?



← **blended** →

**face-to-
face**

**classroom
aids**

flipped

hybrid

**fully online
(distance)**

no technology

(delivery)

all technology

Figure 9.1.2 The continuum of technology-based teaching

The continuum of technology-based teaching
(Bates, 2015)

Hybrid learning:

redesign the whole learning system to create optimum synergy between the in-person sessions and learning online

Everything that can be
done online should be done
online!

Hundreds of research papers have shown
that face-to-face teaching is not more
effective than online teaching

Everything that can be
done online should be done
online!

and...

online learning is usually less expensive, more
flexible and more convenient for the students

Instead of asking what
should be done online, we
ask what should not be
done online?

Face to face:

- Conversational interaction for understanding some academic knowledge
- For teachers to assess and comment on students' independent work

A photograph of five black graduation caps with tassels floating in a blue sky with white clouds. The caps are scattered across the frame, with one in the top left, one in the top right, one in the center, one in the middle left, and one in the bottom right. The entire image is framed by a thin black border, which is itself set against a larger yellow background.

Academically *adrift*

Limited Learning on College Campuses

Richard Arum and Josipa Roksa

Academically Adrift: Highlights

- 36% of students did not demonstrate any significant improvement in learning over four years of college.
- 32%: no courses with >40 pages reading per week
- 50%: no writing >20 pages a semester
- 100%: average 12-14 hrs/wk studying



How much haematology online?

Bates, 2015

- Exploring how technology can be used as a catalyst for change in the system
- Technology as a tool to help develop core skills that will enable students to thrive in the future world of work

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TOO MODEST!

- Exploring how technology can be used as a catalyst for change in the system
- Technology as a tool to help develop core skills that will enable students to thrive in the future world of work
- Harnessing the transformational power of technology in making learning relevant, engaging and steeped in the real world

YES!

We look forward to a future of hybrid learning where all teaching and learning that **can** be done by or through technology **is** done by or through technology.

The teachers' role will focus on working with individual students to help them embed the knowledge and skills they acquire online and to build up their competency and understanding through constructively critical appraisals of their independent work



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THANK YOU

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