

LEADING WITH SMALL DATA FOR BIG CHANGE



ACT Education Directorate 2019 Leadership Conference

The Leading Edge: leaders and students at the edge of their learning

Thursday 28 March 2019



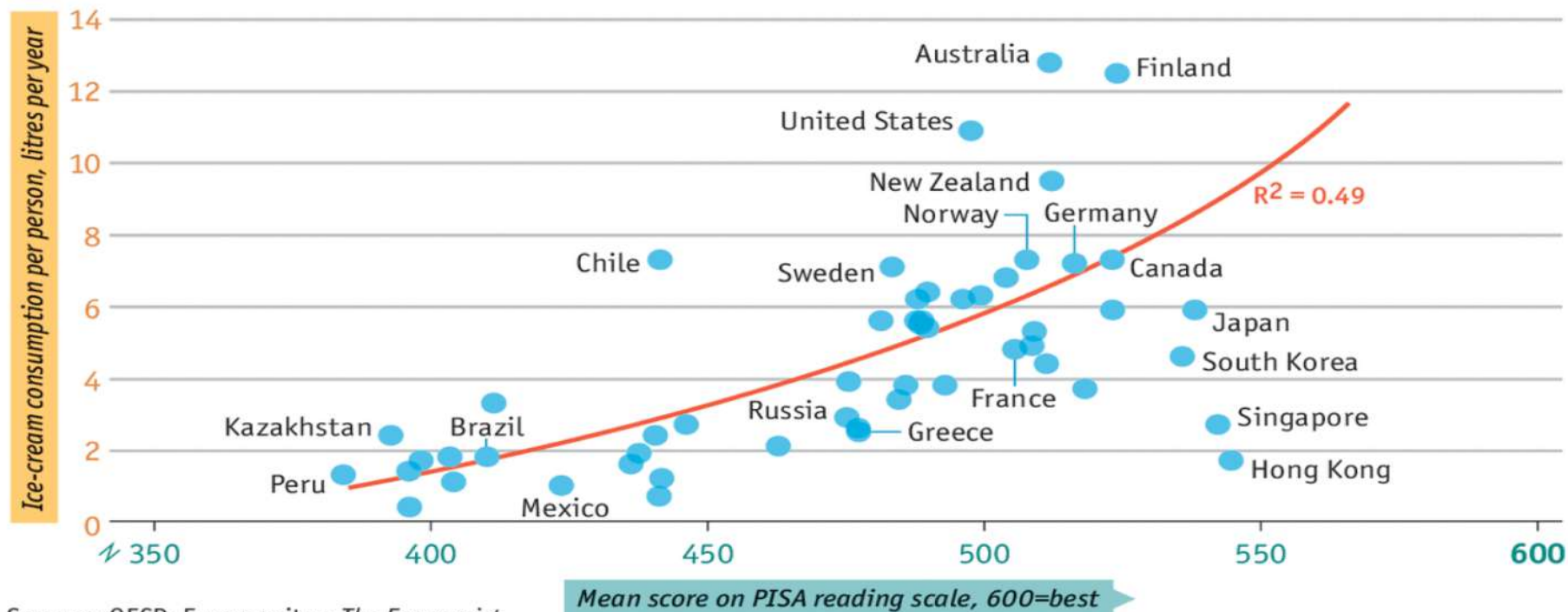
“To PISA,
or not to PISA?”



How to improve PISA results?

Ice-cream consumption and PISA educational performance scores

2012

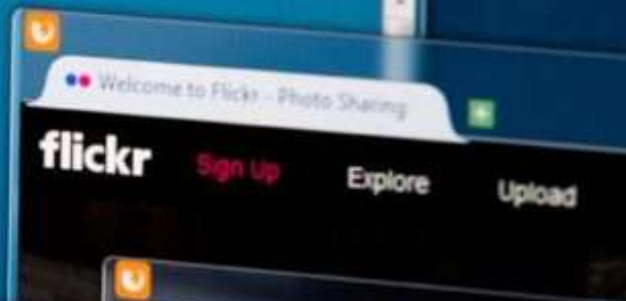


Sources: OECD; Euromonitor; *The Economist*

Big Data



Instagram







Home

Analyse by country

Explore data

Review education policies

Education GPS is *the* OECD source for internationally comparable data and analysis on education policies and practices, opportunities and outcomes. Accessible any time, in real time, the Education GPS provides you with the latest information on how countries are working to develop high-quality and equitable education systems.



Analyse by country

Choose from a wide variety of themes and data to create your own, customised country reports.



Explore data

... By topic and by publication.
Compare countries' by their success in providing a high-quality education for all.



Review education policies

Examine the OECD's extensive research and analysis of education policy around the world.

“Extremely large data sets that may be analyzed computationally to reveal patterns, trends, and associations, especially relating to human behavior and interactions.”

Data mining

“The process of sorting through large data sets to identify patterns and establish relationships to solve problems through data analysis.”

Learning analytics

“The measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs.”

Artificial intelligence

“Artificial intelligence (AI) is an area of computer science that explores the creation of intelligent machines that work and react like humans.”

Which one was made by AI?



A



B



C

Can **Big Data** make
education smarter?

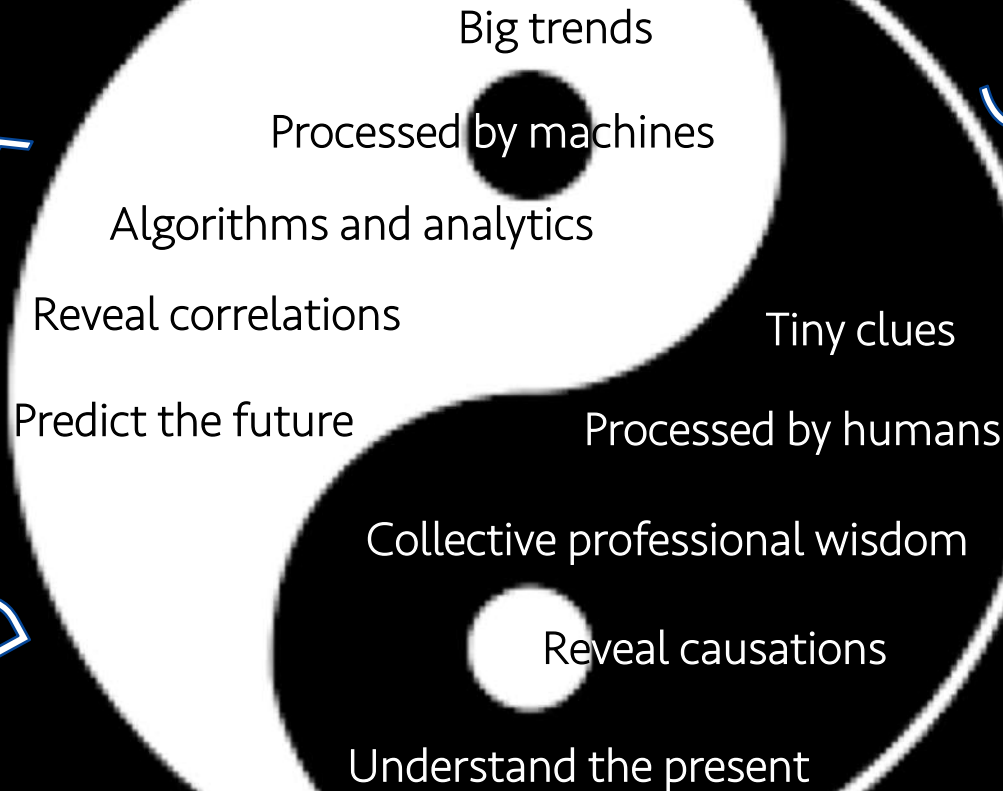
SCENARIO:

“The role of the school will change when *teacherless* classrooms are the way of the future.”

small data

“Tiny clues found in schools that can uncover important relationships between teaching and learning.”

BIG DATA



Small data

Centre for Translational Data Science

THURSDAY, OCTOBER 27, 2016



Digital age 30 projects underway

Small data offers key to revealing the events that define our health

A new research centre hopes to unravel the influences on our existence, writes **Marcus Strom**.



ment and criminology. Traditional data science mines information looking for problems to solve, Professor Durrant-Whyte said.

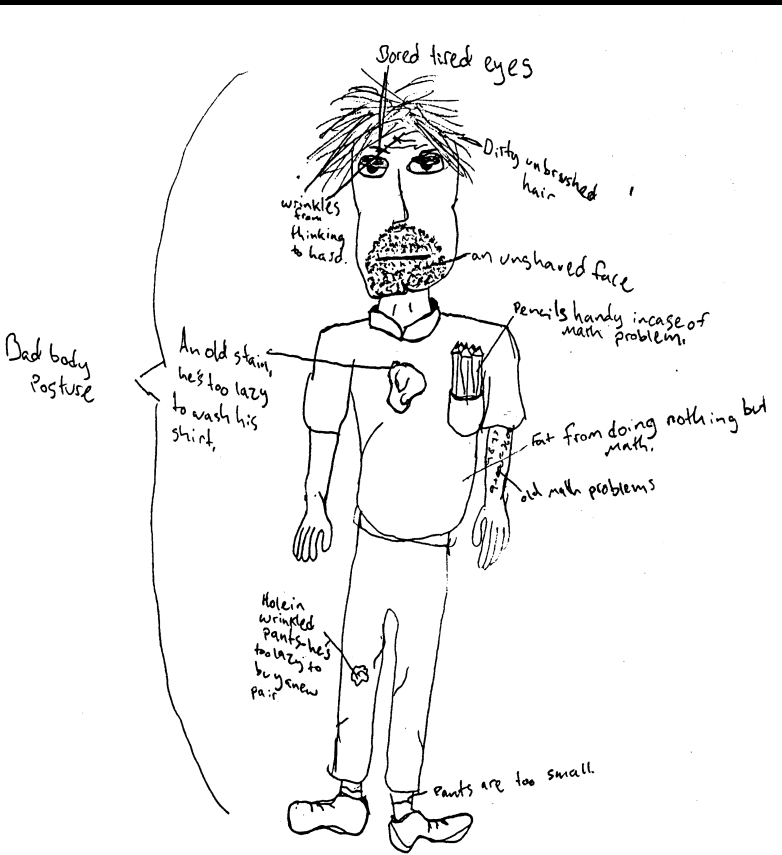
“What we do is find problems,



Small Data can reveal why
things happen in school.

Why so many kids don't like mathematics?

Research question: “What does a mathematician at work look like?”



Usually fat male

Unstylish

No friends - except other mathematicians

No romantic relationships or social life

Wrinkles in their forehead from thinking so hard

Very short tempers

SO WHAT?

- Understand SMALL DATA
- Create cultures of SMALL DATA
- Lead with SMALL DATA, or else...

THANK YOU!

