



Research &
Information
Center



Science, Numbers and Politics
Expert Workshop
European Parliament
Directorate for Structural and Cohesion Policies
Brussels, May 2019



COMMUNICATING SCIENCE AND NUMBERS TO POLICY MAKERS – THE ROLE OF “KNOWLEDGE TRANSLATORS”

Yuval Vurgan, The Knesset Research and Information Center



“Effective communication” – Managing expectations is important

The focus is not on:

- Practical tips for useful or attractive presentation of numbers and/or research findings.



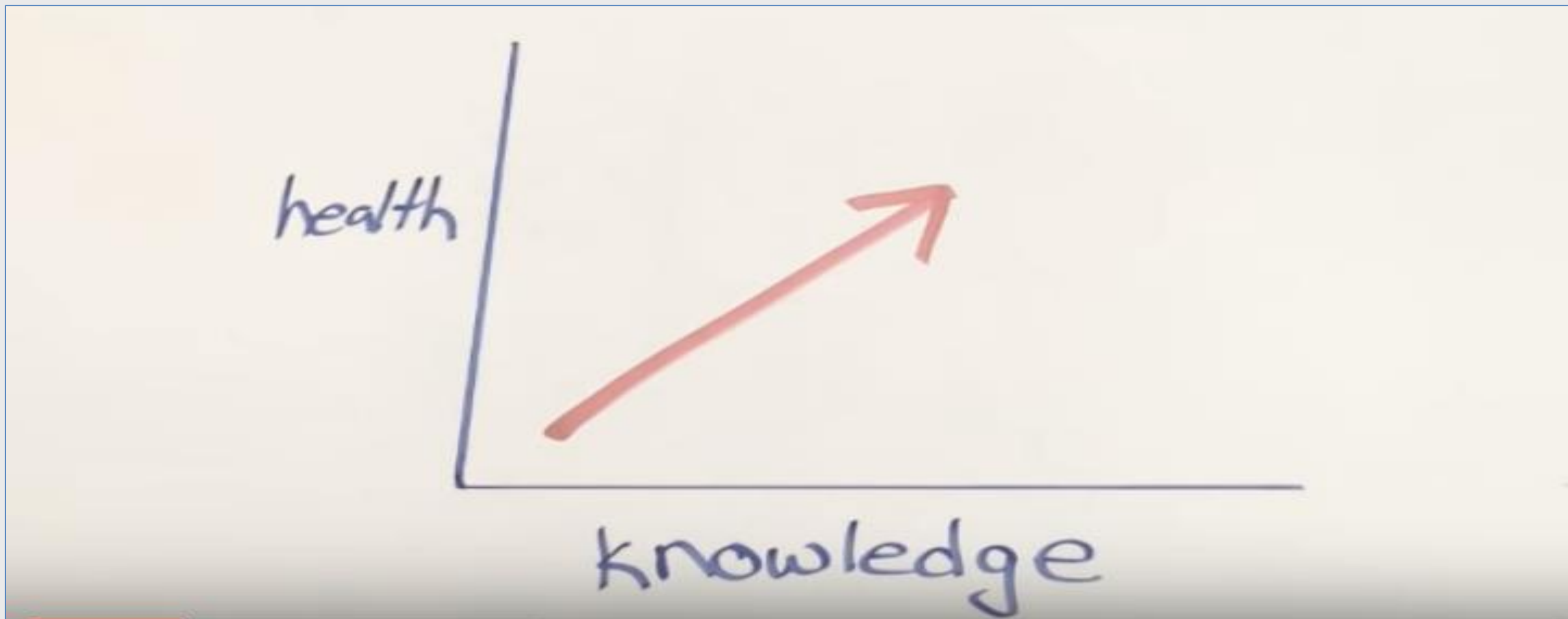
But rather on the questions:

- **What are the considerations we take into account, when “translating knowledge” for policy makers?**
- **How do we express these considerations?**





Knowledge Translation (KT)





KT definition(s)

A great definition

Getting the right information, to
the right people, at the right
time, and in the right format, so
as to influence decision making



- What is the “right” information?
- “To influence” decision making – in what sense?

**Contributing to an
informed process of
making**



“What Works Clearinghouse” – for practitioners

In the general population, 77% of individuals own a smartphone, 73% own a laptop or personal computer, and 53% own a tablet.

How can postsecondary institutions leverage this technology to support student learning?



Find out in the new
WWC Practice Guide
*Using Technology to Support
Postsecondary Student Learning:
A Practice Guide for College and
University Administrators,
Advisors, and Faculty.*





Is there a correct interpretation of research findings?

- “Emphasis should be placed on simplicity and interpretability because stakeholders need to both understand the information provided and also **be able to interpret it correctly**”.
- “It is therefore essential that the analysis and most importantly, the presentation of findings, be carefully considered to avoid potential misinterpretations that could lead to **inappropriate conclusions and/or responses**”.

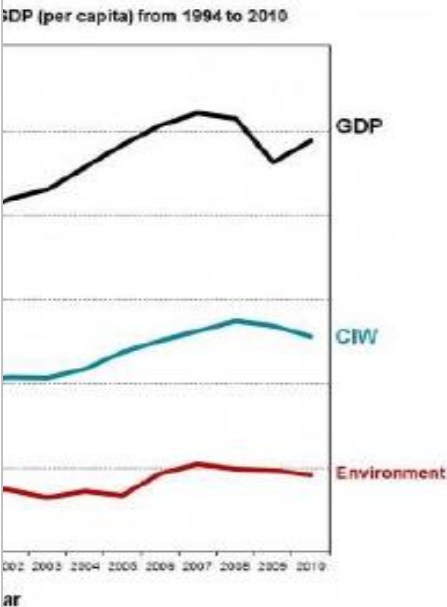
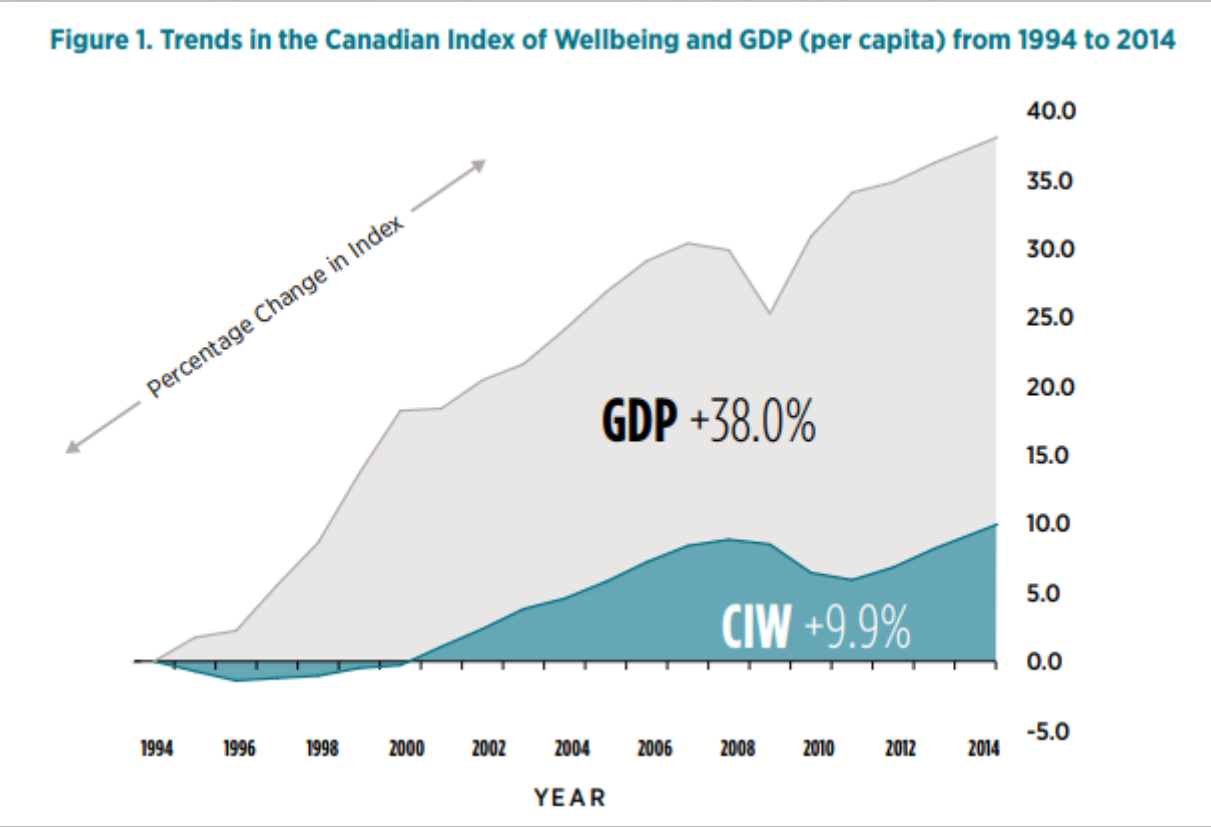
World Health Organization (2014), Implementation research toolkit, “[Data, analysis and Presentation](#)”.



What do we measure? What do we present?



Figure 1. Trends in the Canadian Index of Wellbeing and GDP (per capita) from 1994 to 2014





Is it relevant to policy makers? Practical?

Newshub.
13 May 2019

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Jacinda Ardern pitches 'Wellbeing Budget' to world leaders

24/01/2019 | Jamie Ensor | Lloyd Burr

Reddit | Tweet | Share



Credit: Newshub.

Prime Minister Jacinda Ardern says there has been immense interest in the 'Wellbeing Budget' her Government will implement this year, at the World Economic Forum in Davos.

It's expected to focus less on improving Gross Domestic Product (GDP) and the economy than in past years, and more on ensuring New Zealanders' wellbeing.

- **"Too many people left behind": How the 'Wellbeing' Budget will work**
- **World Economic Forum: What Jacinda Ardern and the world will discuss**

Jacinda Ardern pitches 'Wellbeing Budget' to world leaders



Trust issues

- “It is important to remember that **not all people will reach the same policy conclusion based on the same scientific information** – even if they understand and accept that information.”

House Committee on Science, Space and Technology Chairman, Sherwood Boehlert (R-NY), 2006.



- “Although we would like to believe that the scientific and technical advice and assessment provided from outside remains politically neutral, **this is not necessarily the case.**”

Rep. Rush Holt (D-NJ), [same hearing](#), 2006.



Some interim suggestions

- Some suggestions are referred to scientists:
“Share your informed opinions, and be willing to say when you are unsure about something.”
Source: [How can scientists engage with policy makers?](#)
- As for “knowledge translators” –
 - Effective communication through:
 - Using wide range of evidence.
 - Critical analysis of data and research findings; pointing out limitations of data.
 - Reaching-out to alternative sources of information (including stakeholders).

Parliamentary research “Knowledge translators” in action: Exhibit A

“Although this study is focusing on the quantitative aspects of educational evaluation, with a special emphasis on data, indicators and measurements, **it is important to stress that educational evaluation, especially at European level, cannot be reduced to this dimension.**”





Parliamentary research “Knowledge translators” in action: Exhibit B



Science, Technology, Engineering, and Mathematics (STEM) Education: A Primer

Data and Methodological Limitations

Data are a big part of the current STEM education policy debate. Those who advocate for or against various STEM education policy proposals cite a variety of data and statistics in support of their assertions. However, in some cases data showing the impact of policy changes may lag behind those changes by years or decades, making accurate evaluation and policy assessment difficult. In other cases, data may be interpreted or used in ways that do not reflect potentially important research or methodological limitations. For example, one 2010 editorial stated that “the World Economic Forum ranked [the United States] 48th out of 133 developed and developing nations in quality of mathematics and science instruction.”⁶¹ The editorial did not explain that the source of the 48th place ranking was an opinion survey of global business executives. Although opinion surveys are often relevant in policy debate, policy makers may interpret their results differently than they would other kinds of evidence. These and other data limitations may challenge federal policymaking in this area.

“Data are a big part of the current STEM education policy debate [...] However, in some cases data showing the impact of policy changes may lag behind those changes by years or decades, making accurate evaluation and policy assessment difficult.

In other cases, **data may be interpreted or used in ways that do not reflect potentially important research or methodological limitations.”**



What about wider context? Local/particular context?

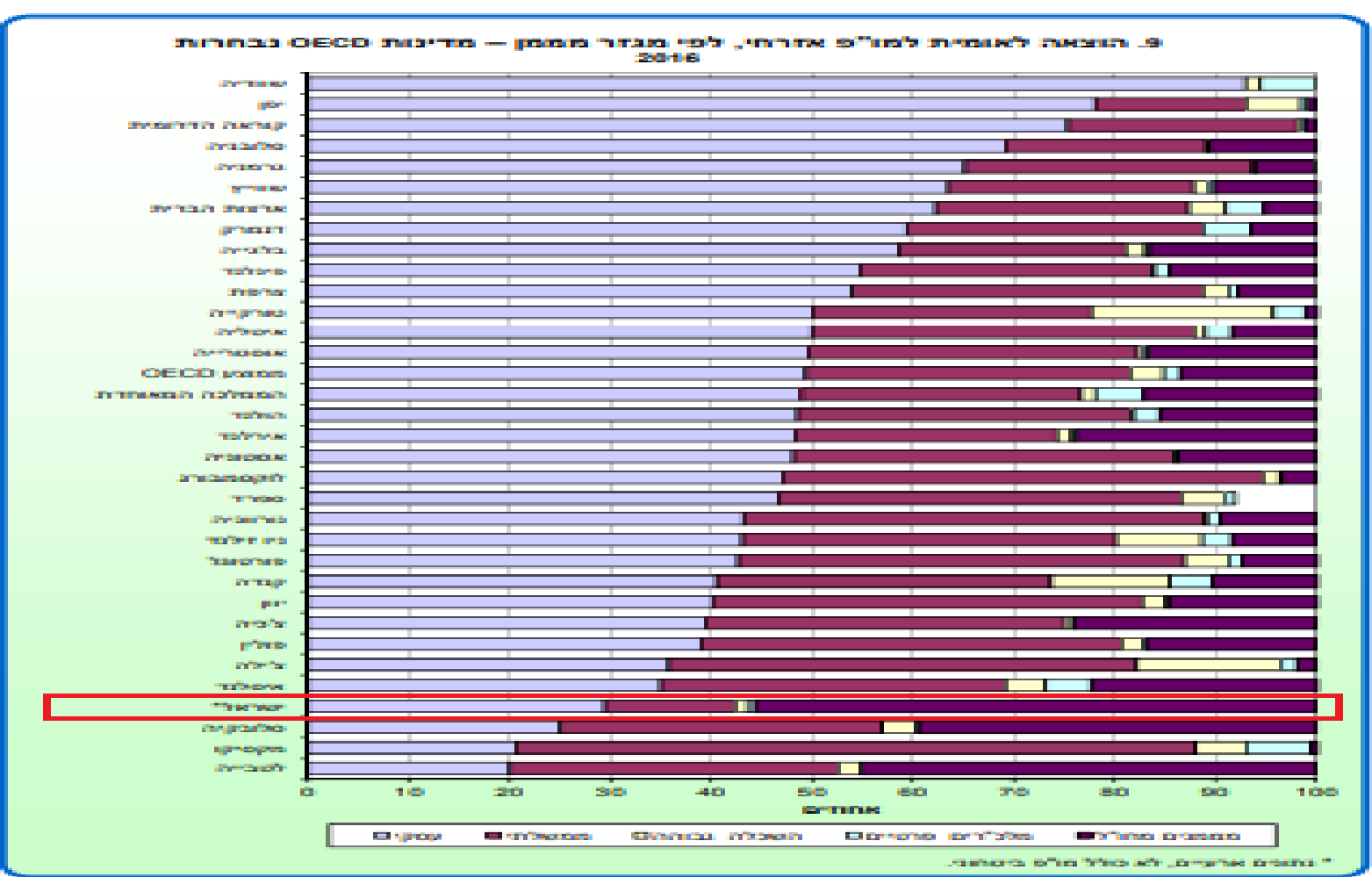
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Global Researchers Per Mil

- South Korea
- Israel
- Japan
- Finland
- Switzerland
- Sweden
- Austria
- Denmark
- Germany
- United States



מממנים מחו"ל
55.6%

*נתונים ארעיים.



What is not measured (and therefore not presented)?

Table 1: Teacher Cognitive Skills by Country

		Country				
		Czech R.	Denmark	Estonia	Finland	France
		305	295	285	317	302
		300	288	294	322	296
		5	7	-9	-5	6
		73	56	60	73	80
		77	60	69	74	77
		141	413	188	221	163
		Germany	Greece	Ireland	Israel	Poland
Numeracy		308	282	295	270	277
Literacy		301	286	300	281	293
Domain difference		7	-5	-4	-12	-16
Numeracy percentile		72	74	75	57	64
Literacy percentile		74	75	74	62	73
Observations		127	150	180	250	199



Some current challenges

- Science (or expertise) “skepticism” –

If we present a more complex picture, with further remarks and reservations, so maybe “science has no good answers”?!

- Increased demand for infographics –

Is it feasible to present multiple/alternative visualizations of the same topic?

- Big data –

If its so big, how do we even know what we have and what we don't?



Fellowship initiatives



The Science of Making a Change

The Mimshak Fellowship cultivates young leadership of scientists to act as scientific advisers within governmental administrations, and to assist in the process of decision-making on acute environmental issues

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Connecting Academia to Policymakers & Public

Goals:

- Creating a channel for active participation in the development of science policy.
- Encouraging interaction with media organizations.
- Developing contacts between Israeli academia and the community.
- Providing a forum for expressing positions on scholarly matters of national and international importance.

Research for the Next Generation

- Opinion piece about Israeli participation in the Horizon 2020 program of the European Union (EU Framework Programme for Research and Innovation), by Prof. Dan Oron and Dr. Rotem Sorek.