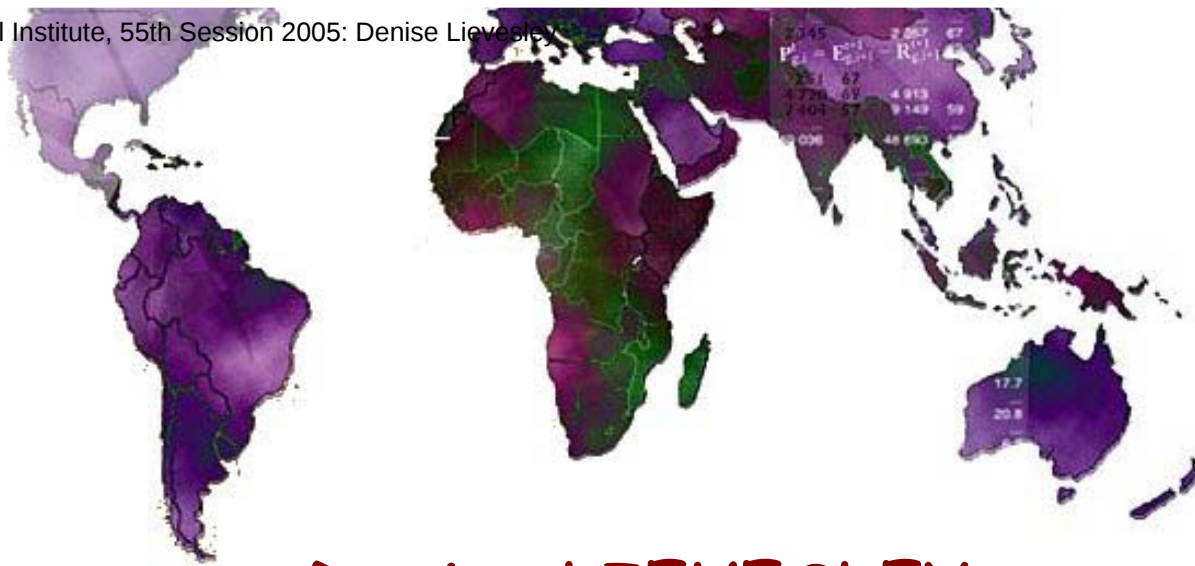




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UNESCO

- Established at end of 2nd World War because *"wars begin in the minds of men and therefore it is in the minds of men that the constructs of peace must be created."*

Education

- Improve the quality of life
- Increase social and economic development
- Increase competitiveness
- Reduce inequities
- Empower people and give them control over their lives

Science

- Ensure that the benefits of science are spread through the world
- Support the development of science of relevance to the nation
- Allow the public to take part in debates about the use of science
- Develop local scientific expertise

Culture and communications

- Importance of being able to access **and use** information to participate in society and to be able to judge the extent to which one is being governed effectively
- Specific need for skills to use ICTs within the context of the *Information Society*

- No modern society can function meaningfully as a democracy if the electorate remains statistically illiterate
- ...So our interest is in ensuring that everyone has the information and skills necessary for this
- ...and our task in the UIS is to measure this

Essential skills:

- Are useful in multiple life contexts;
- Are associated with social, economic , educational and health outcomes;
- Can be learned and taught;
- Improve individual's ability to adapt to change and to shape their environment.

Outcomes associated with skill

	MICRO (individuals)	MESO (firms, communities, schools, families)	MACRO (economies, societies, regions, special population)
Economic	■ employability ■ wages ■ transfers to families in poorer countries	■ firm profitability ■ productivity ■ adaptability of firms and communities ■ changes power distributions within families	■ overall growth rates ■ speed of adjustment to shocks and changes
Social	■ mental health ■ volunteering	■ community participation ■ social inclusion	■ trust ■ social capital
Health	■ physical health ■ mortality ■ morbidity	■ institutional efficiency ■ insurance costs	■ equity ■ opportunity costs
Educational	■ access ■ persistence to completion ■ skill level	■ inclusion ■ average ■ quality	■ growth and adaptability

questions

- *Within societies* presumably there are different groups who need different levels of statistical literacy? (media, public servants, policy makers, medical practitioners, teachers, judges)
- *Across societies* to what extent is statistical literacy culturally specific or are there elements which all people need to know? Can we express and measure these in ways which are cross-nationally comparable?

Cross-national studies

- School assessments - PISA, TIMSS,
- Adult literacy surveys - IALS, ALL
- Adult education surveys being developed by Eurostat and OECD

**Poor coverage of developing countries
and of specialists other than teachers**

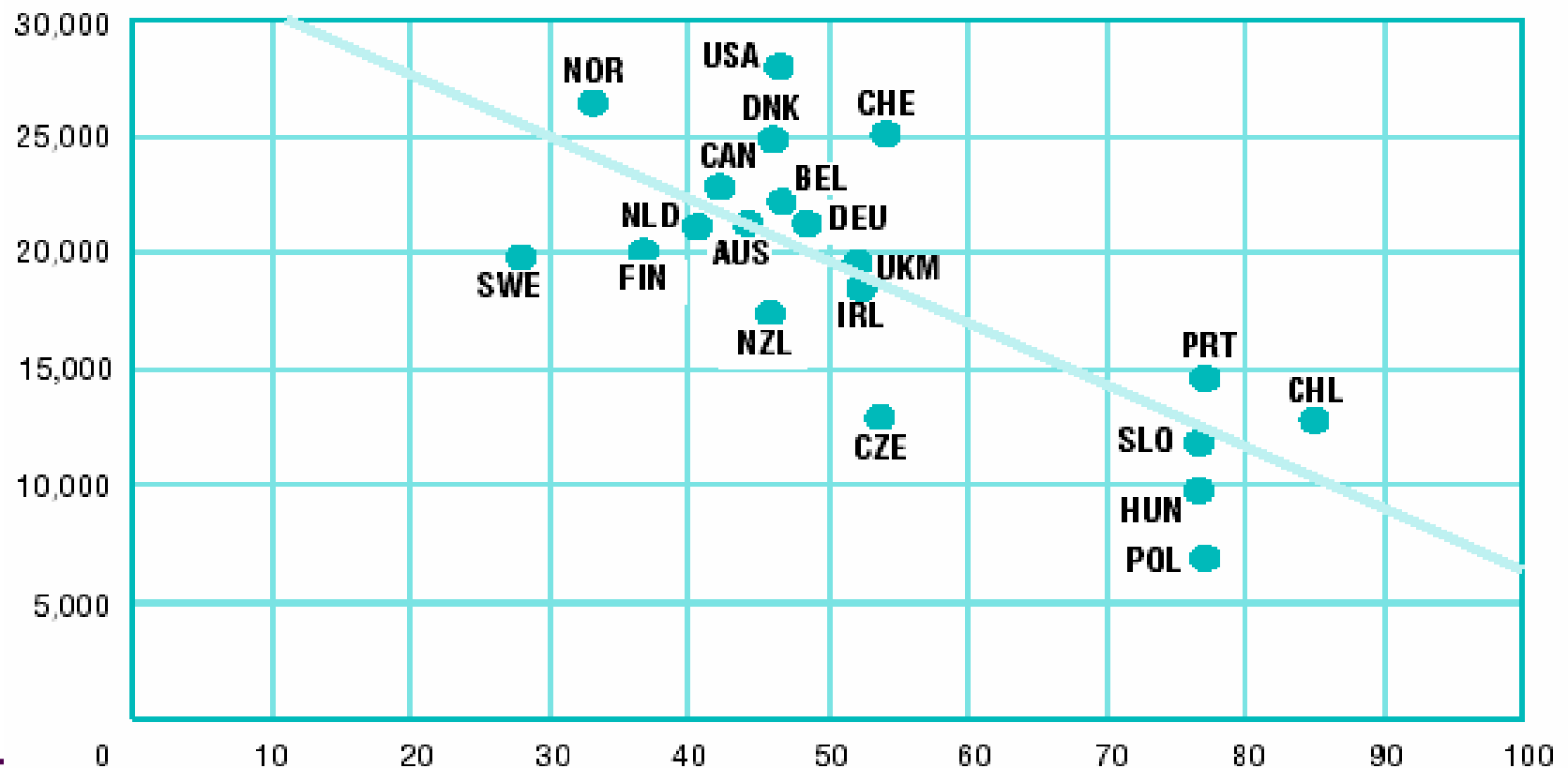
Value of extending these studies?

Advocacy, benchmarking and comparative purposes,
global perspective

GDP PER CAPITA AND LITERACY

Relationship between GDP per capita¹ and per cent at literacy levels 1 and 2, population aged 16-65, 1994-1998

GDP per capita



IASI (literacy assessment and monitoring programme)

- Survey of adults
- Numeracy questions included
- Mathematics for a purpose
- Numeracy is the knowledge and skills required to effectively manage and respond to the mathematical demands of diverse situations.

Numeracy and Traditional Mathematics

- It is more intuitive and less formal, more contextual and less abstract, more concrete and less symbolic than “school” mathematics.
- Numeracy is a functional competency; the capacity to act and bring one’s knowledge (mathematical and other) to bear on tasks *in context*.

Numerate behaviour

is observed when people manage a situation or solve a problem in a real context;

involves responding to information about mathematical ideas that may be represented in a range of ways;

requires the activation of a range of enabling knowledge, factors, and processes.

Identify/Locate Numbers

- Interpret them
- Act upon them through
 - ordering/sorting
 - counting
 - estimating
 - computing
 - measuring
- Communicate about numbers

■ Information:

- Quantity
- Dimension/Shape
- Change
- Pattern/Relationships
- Chance

■ Stimulus:

- Objects and pictures
- Numbers and symbols
- Formulae
- Diagrams and maps
- Graphs
- Tables
- Texts