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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
ducational	▪ 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

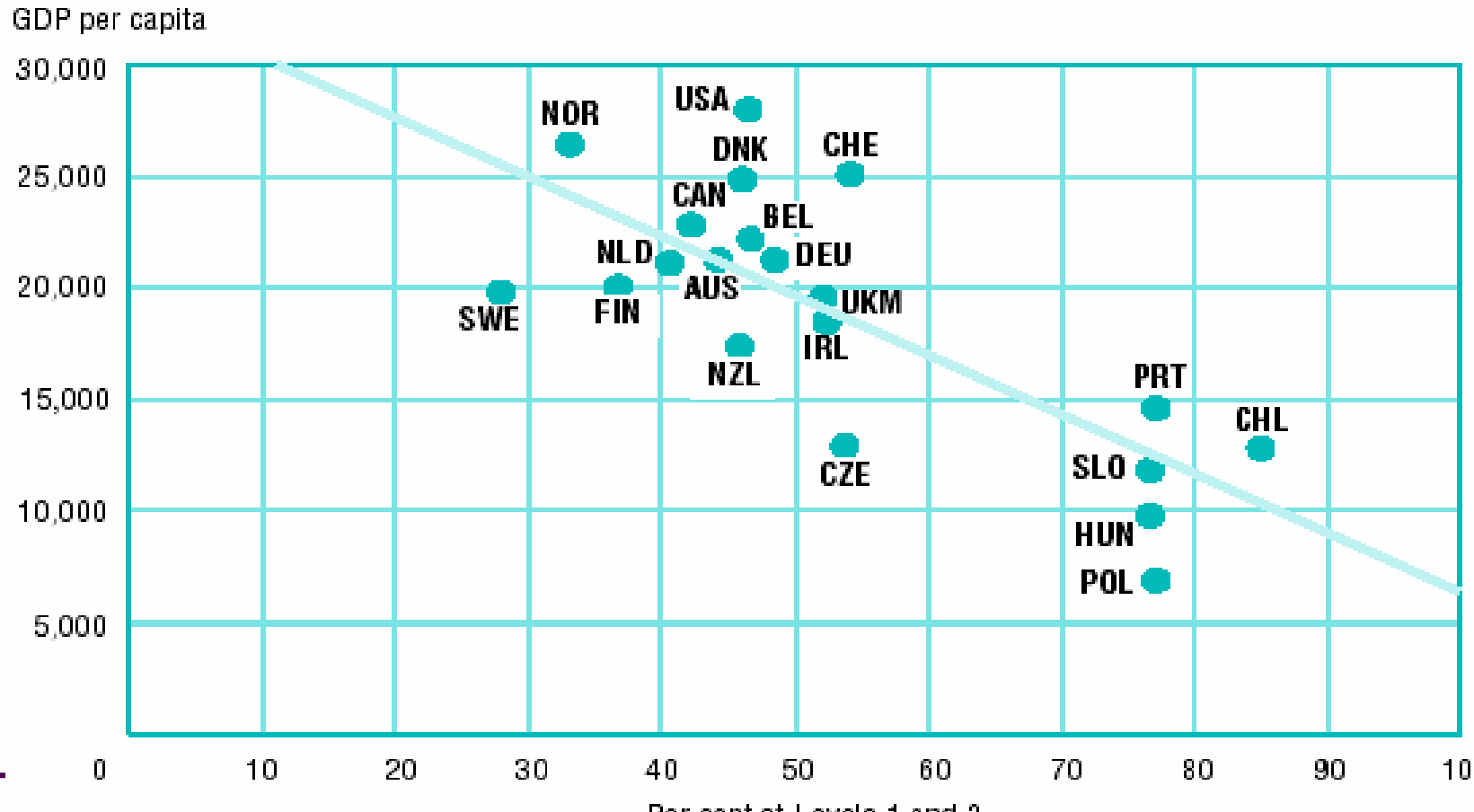
Poor coverage of developing countries and of specialists other than teachers

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



LAMP (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