

CARIBBEAN

COMMUNITY

SECRETARIAT

THIRTY FIRST MEETING
OF THE STANDING COMMITTEE
OF CARIBBEAN STATISTICIANS

RESTRICTED

SCCS/2006/31/24

Port of Spain, Trinidad and Tobago

6-8 November 2006

6 November 2006

LITERACY ASSESSMENT AND MONITORING PROGRAMME (LAMP)

Please see attached Paper entitled “**Literacy Assessment and Monitoring Programme**”

Literacy Assessment and Monitoring Tools for the Caribbean: A Proposal

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**A presentation to the Thirty First Meeting of the Standing
Committee of Caribbean Statisticians
Port-of Spain, Trinidad and Tobago
November 6 – 8, 2006**

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Why we care about skills and learning :

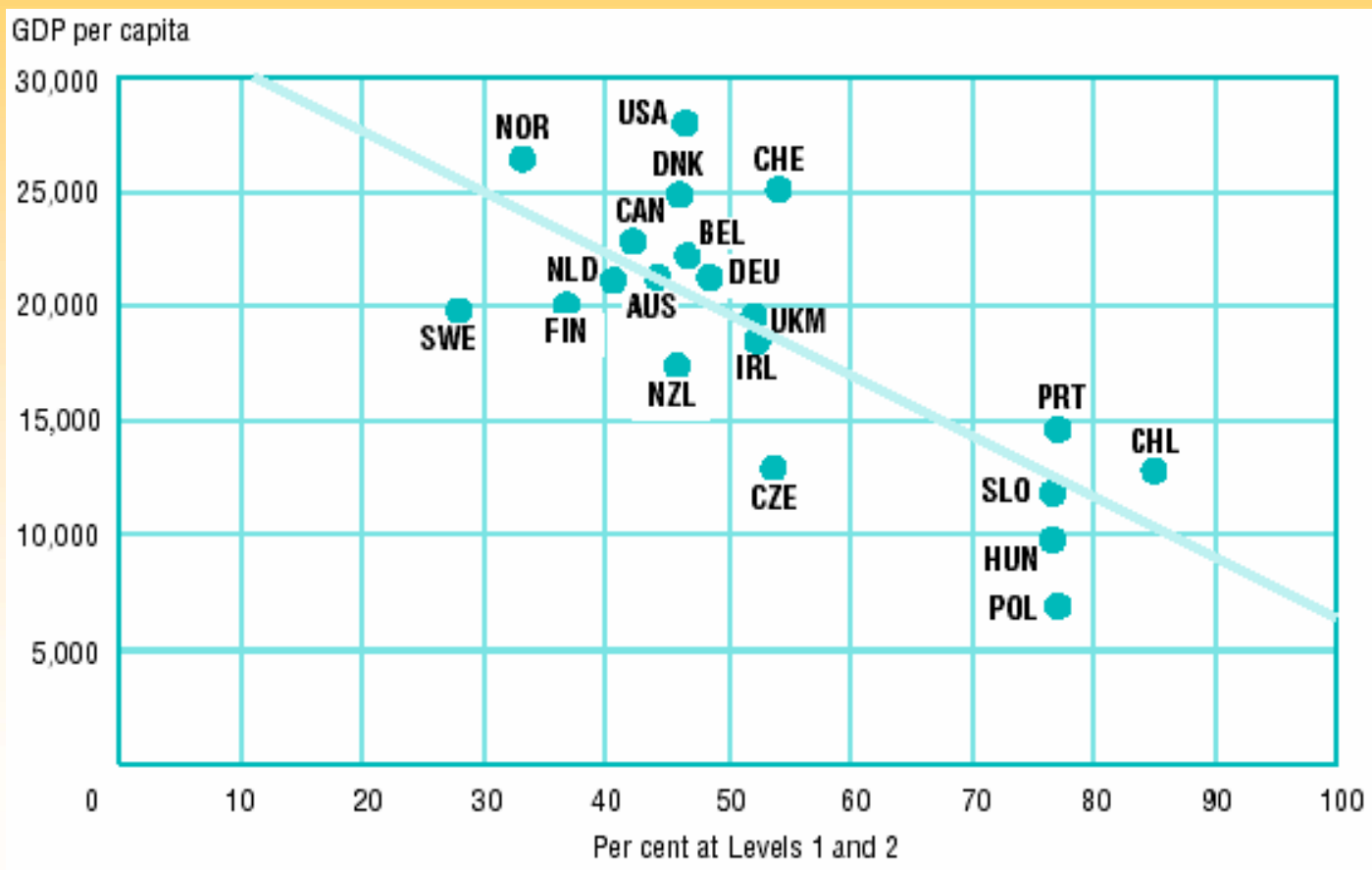
*People are the common denominator of progress. So... no improvement is possible with unimproved people, and advance is certain when people are liberated and educated. It would be wrong to dismiss the importance of roads, railroads, power plants, mills, and the other familiar furniture of economic development.... But we are coming to realize... that there is a certain sterility in economic monuments that stand alone in a sea of illiteracy. Conquest of illiteracy comes first. [John Kenneth Galbraith](#), *The Affluent Society* (1958) US (Canadian-born) administrator & economist (1908 - 2006)*

Why we care about skills and learning: Sources of policy interest

- **concerns about skill barriers to economic growth, productivity growth and rates of technological innovation (GREED)**
- **concerns about the role of skill in creating social inequity in economic outcomes (FAIRNESS)**
- **concerns about the demand for and efficiency and effectiveness of investments in public goods and services such as education and health (PARSIMONY)**

Skill and macro-economic outcomes: GDP per capita and Literacy

A. Relationship between GDP per capita and per cent at prose literacy Levels 1 and 2, population aged 16-65, 1994-1998

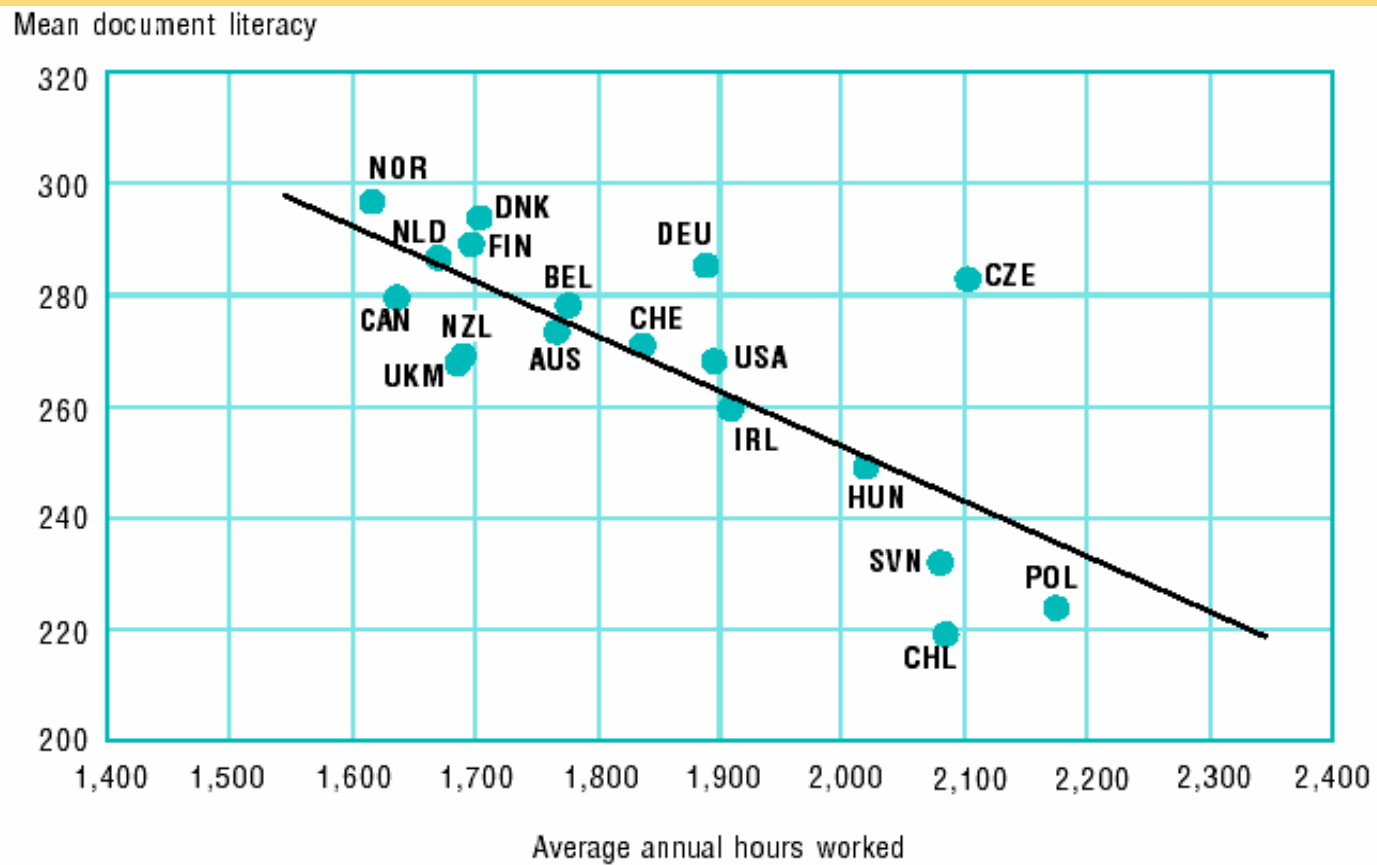


Skill and macro-economic outcomes:

- **Average skill levels explain over 55% of growth differences in GDP per capita 1960-1995 in the OECD. If past relationship holds a 1% rise in average literacy will precipitate a 1.5% permanent increase in GDP per capita and a 2.5% increase in labour productivity**
- **Differences in the % at literacy level 4 and 5 do not translate into growth differences**
- **Differences in the % at literacy level 1 appear to retard growth and result in large differences. Low skill seem to inhibit rates of technical innovation and rate of adoption of more productive work organization**
- **The level of tertiary participation has a strong, positive independent effect on growth**
- **Skill increases lead growth!!!!!!**

Skill and macro-economic outcomes: Labour volume by document literacy

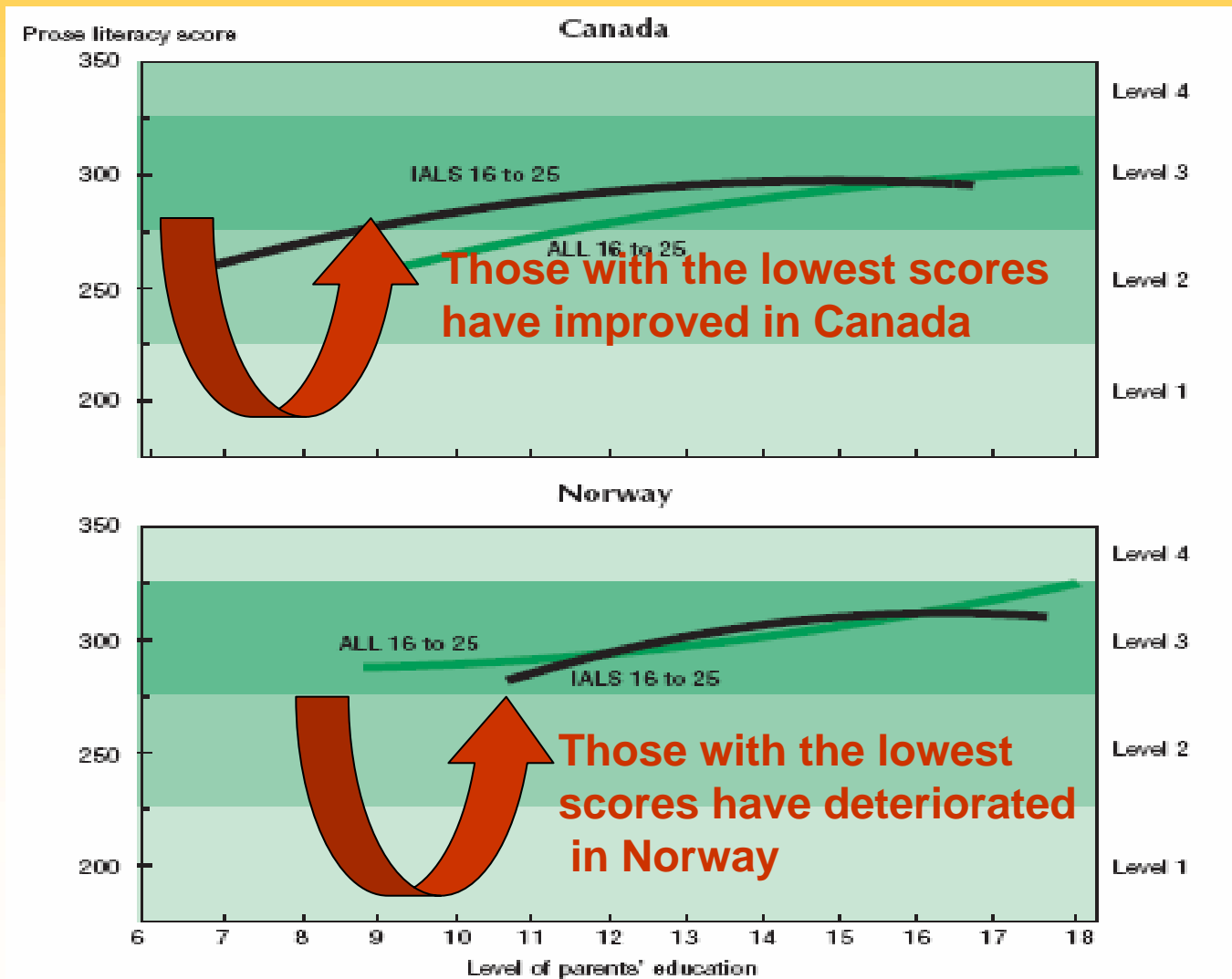
Average annual hours worked per person in employment and mean literacy proficiency, document scale, population aged 16-65, 1994-1998



Source: International Adult Literacy Survey, 1994-1998.

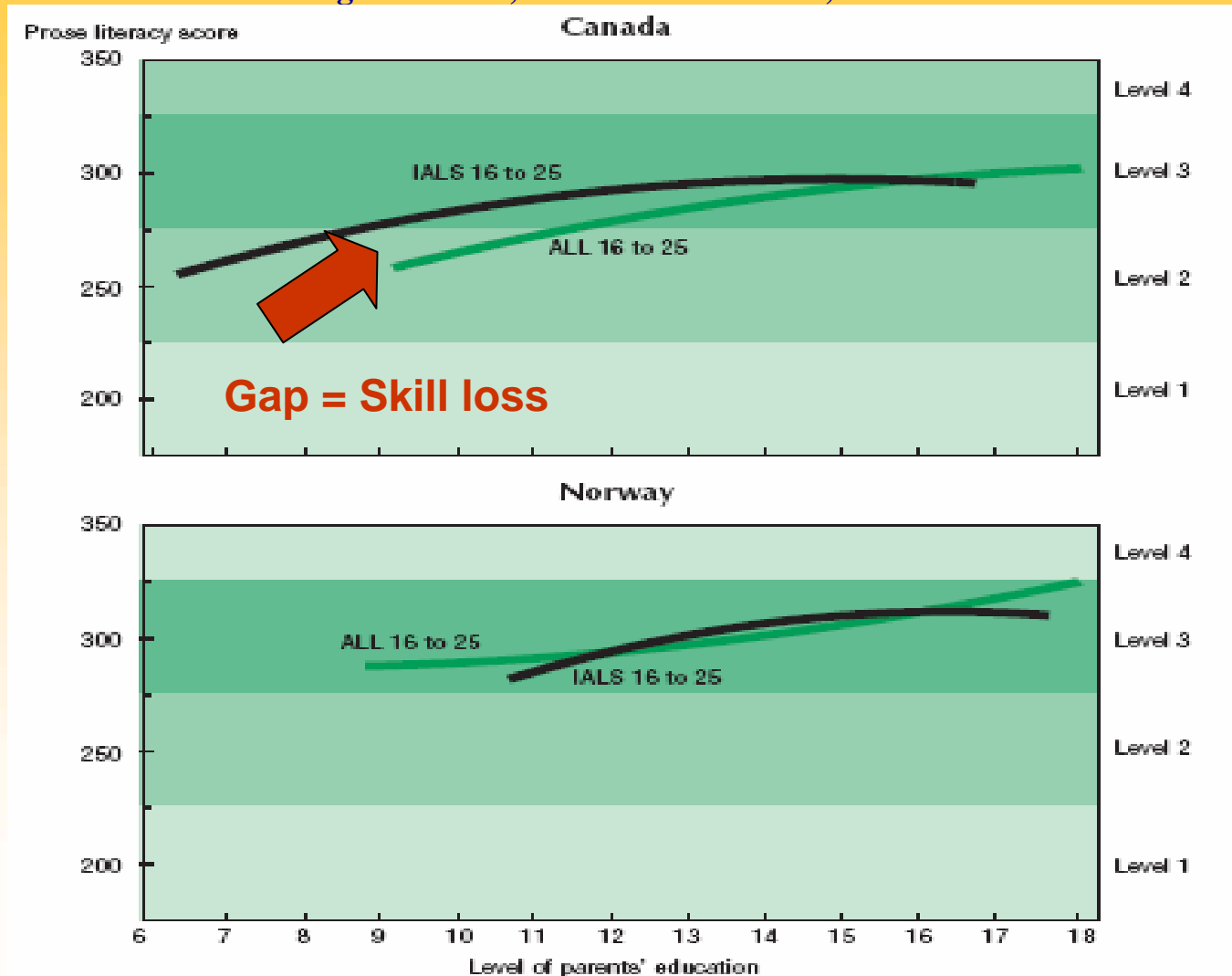
Where skill loss is concentrated: Socio-economic gradients for three cohorts of adults

Relationship between respondent's prose literacy scores and parents' education in years, populations aged 16 to 25, 26 to 45 and 46 to 65, 2003



Where skill loss is concentrated: Socio-economic gradients for three cohorts of adults

Relationship between respondent's prose literacy scores and parents' education in years, populations aged 16 to 25, 26 to 45 and 46 to 65, 2003



What makes skill more important now: Key policy drivers

- **Demographics: OECD countries ability to meet rising skill demand education reform limited by low fertility, much more latitude for Asia in near term but not long term**
- **globalization of markets for goods and services: huge economic opportunity for those that can compete**
- **globalization of markets for capital and technology: everyone has access to the same inputs a the same costs**
- **Multinationals and outsourcing to low cost countries: job loss is inevitable**
- **diffusion of information and communication technologies: increases productivity, amplifies skill-based inequalities if one can achieve high rates of adoption**
- **Rising skill supply in the developing world: competition will increase, putting pressure on wage rates**

One needs statistical systems to address these policy concerns by providing:

- **Valid, reliable, comparable and interpretable estimates of the quality of stock of skill, its determinants and relationship to a range of individual and macro outcomes**
- **Valid, reliable, comparable and interpretable estimates of the quality of key skill flows, their determinants, social distribution and impact on a range of individual and macro outcomes**
- **Data from both these systems need to fulfill three separate functions:**
 - **Knowledge generation: understanding cause and effect**
 - **Preparation for action: policy planning and program design**
 - **Monitoring: tracking if things are unfolding as expected**

What one needs to support validity, reliability, comparability and interpretability:

- **Strong theory**
- **Good measures that reflect on teaching and learning**
- **State of the art methods**
- **Control of key sources of error and bias**
- **Additions to a body of work**
- **Open educational process**

A Framework for Thinking About Essential Skills :Profiles of Skill Supply and Demand



Narrowly Portable

Home Environment

- Family • Culture
- Health

Largely Portable

Fully Portable

Key Competences

The Community

- Consumer markets
- Health
- Citizenship
- Culture
- Education

Firm & Job Specific Skills and bodies of knowledge

...depend upon

Analytic Problem Solving

- decision making
- job task planning and organizing
- significant use of memory

Workplace Inter-Personal

- teamwork
- leadership
- practical intelligence

Using tools associated with pervasive technologies of production e.g. ICT's

...depend upon

Motor Skills

Numeracy

Oral Communication

- Speaking
- listening

Intra-personal Ability to Learn

- Motivation
- metacognition

Written Communications

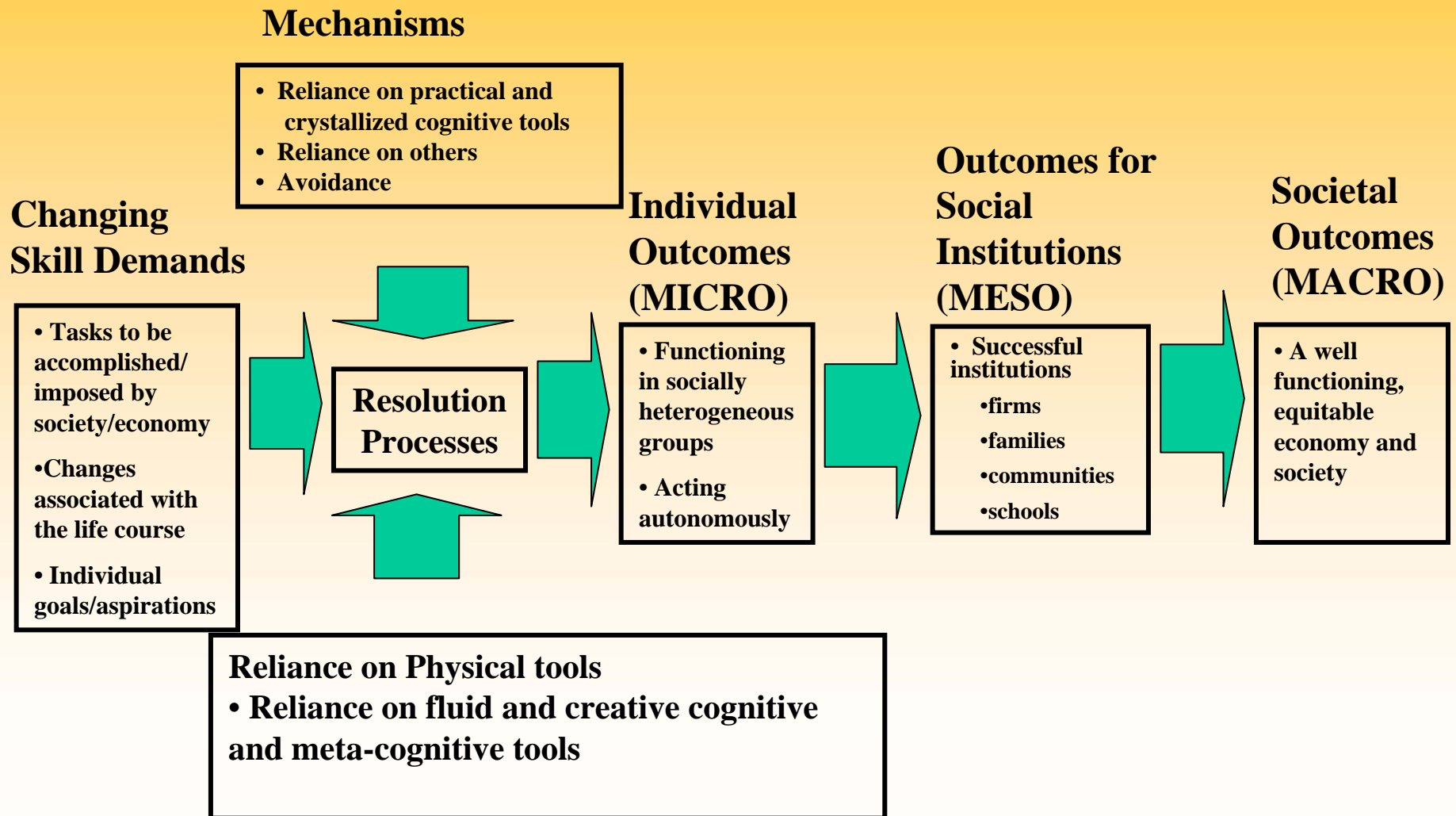
- reading - text
- reading - document
- writing

The World of Work

Crystallized
Fluid
Creative

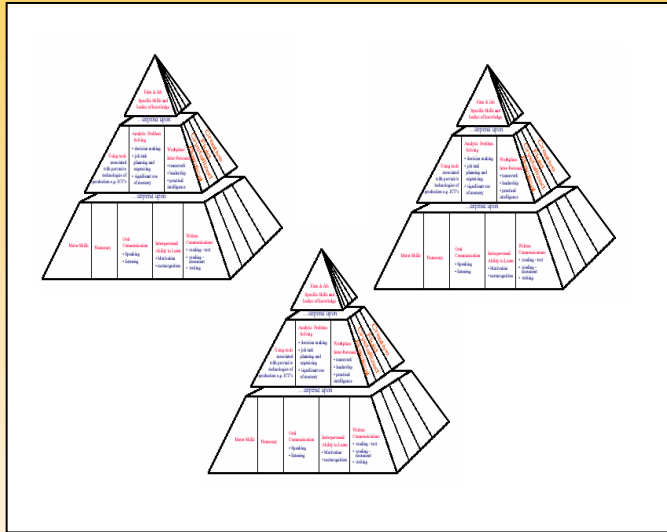
Practical
Crystallized
Fluid
Creative

A Framework for Thinking about Essential Skills



Theoretical Framework: A “Markets” Model of Skill

Skill Demand



Markets for skill:

- Education
- Labour
- Health
- Social

Skill Supply = skill stock + net skill flow from learning: lifelong, life-wide

- + quality of early childhood experience
- + quantity of primary and secondary education
- + quantity and quality of tertiary
- + quantity and quality of adult learning (formal, non-formal, informal)
- +/- immigration
- +/- emmigration
- skill loss associated with insufficient demand
- +/- social demand for skill
- +/- economic demand for skill

Outcomes

Context	MICRO (Individuals)	MESO (Social Institutions)	MACRO (Systems)
• Economic			
• Social			
• Educational			
• Health			

What measurement technologies have been applied:

- **Household surveys that includes a direct assessment of literacy and numeracy skill and a rich set of covariates (both determinants and outcomes)**
- **30 minute background questionnaire and 60 minute test**
- **International Adult Literacy Survey (IALS), Adult Literacy and Life Skills Survey (ALL), International Survey of Reading Skills, Literacy Assessment and Monitoring Program (LAMP)**
- **These surveys provide:**
 - **A framework for undertaking advanced policy analyses and program design in multiple policy domains**
 - **A mechanism for monitoring progress over time**
 - **A mechanism for transferring advanced measurement and analytic technologies**

What has been measured at the high “reading to learn” end of the skill distribution

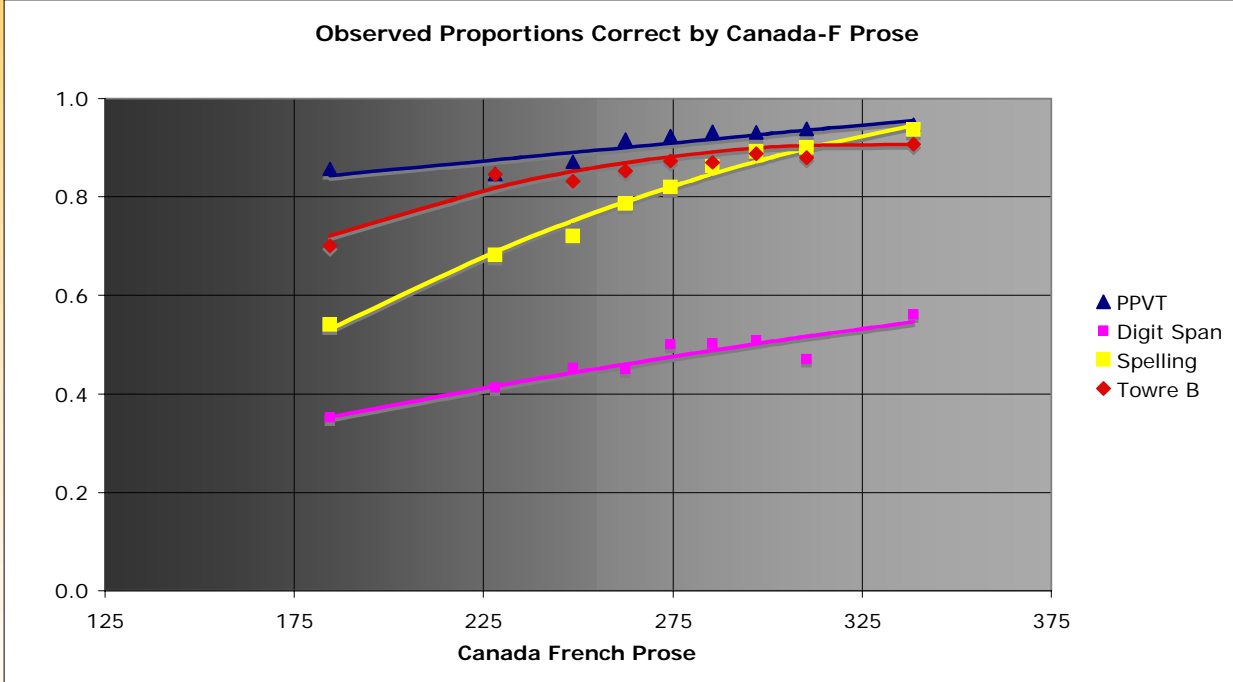
- **Prose Literacy:** the knowledge and skills needed to understand and use information from text including editorials, news stories, poems and fiction;
- **Document Literacy:** the knowledge and skills required to locate and use information contained in various format, including job applications, payroll forms, transportation schedules, maps, tables and graphics;
- **Numeracy:** the knowledge and skills required to understand, use, interpret and communicate mathematical information contained in different life situations.

What has been measured at the low skill

« Reading to learn » end:

The component skill measures that make up reader profiles are measured by:

- **1. *Alphanumeric perceptual knowledge and familiarity***
Recognise the letters of the alphabet and recognise single digit numbers.
- **2. *Word recognition***
Recognise common words that appear frequently in print. These common words are expected to be in the listening/speaking lexicon/vocabulary of an individual who is a speaker of the target language.
- **3. *Decoding and sight recognition***
Produce plausible pronunciations of novel or pseudo words by applying knowledge of the sight-to-sound correspondences of the writing system, and do this accurately, rapidly and with ease.
- **4. *Sentence processing***
Process simple written sentences and apply language skills to comprehend - accurately, rapidly and with ease.
- **5. *Passage reading***
Process simple written passages and apply language skills to comprehend - accurately, rapidly and with ease.



What makes sense for the Caribbean:

- **The current generation of assessments are too expensive and impose too high a response burden to be applied in the Caribbean as is as they would require 2250 completed cases per country in the main assessment**
- **An alternative approach would be to treat each country as a sub-population, thereby reducing the required sample size to roughly 650 completed cases per country**
- **This would require countries to agree to one common form of the assessment**
- **The reduced sample size would support fewer point estimates but would support detailed multivariate analyses of determinants and outcomes**

Information:

- **Background on LAMP and ALO:** www.uis.unesco.org
- **Learning a Living: First results of the Adult Literacy and Life Skills Survey** (www.statcan.ca)
- **The Adult Literacy and Life Skills Survey: New Frameworks for Assessment** (www.statcan.ca)
- **Sabatini, J. P. (2004). *Framework for the Assessment of Reading Component Skills*.** (www.uis.unesco.org)