The Policy Origins, Attributes and Policy Yield of UNESCO’s Literacy Assessment and Monitoring Program (LAMP)

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Why we care about skills and learning: Sources of policy interest
• Skills are important to several pressing policy issues:
  ➢ GREED: concerns about skill barriers to economic growth, productivity growth and rates of technological innovation
  ➢ FAIRNESS: concerns about the role of skill in creating social inequity in economic outcomes
  ➢ AVARICE: concerns about the quality of educational output
  ➢ AVARICE: concerns about the efficiency and effectiveness of investments in public goods and services, particularly in education

What makes investment in skills a priority?
• Global markets for goods and services = huge opportunity
• Global markets for inputs = what the average worker knows and can do becomes much more important
• Multinationals drive much more rapid rates of adjustment in the terms of trade = inaction will have a cost
• Developing countries are relatively young = improving the quality of initial education a priority
• Initial education is not sufficient. Low skilled adults reduce economic growth = investment in adult literacy a must
• Diffusion of ICT’s will amplify competiveness and productivity gaps

What developing countries need:
• A method that provides information about literacy and numeracy that is:
  valid,
  reliable
  comparable (among population sub-groups and over time)
  interpretable (in social, educational and policy terms)

What makes LAMP special:
• LAMP design incorporates advances in:
  – the theory about what underlies the difficulty of adult reading and numeracy tasks
  – the theory about the process of learning to become a fluid and automatic reader
  – In how the data is collected and processed
  – Advances in the way individual proficiency is summarized

“Literacy is the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve his or her goals, develop his or her knowledge and potentials, and participate fully in the community and wider society.”
LAMP incorporates a new conception of literacy:

- Literacy is a tool that one uses to respond to new and unfamiliar reading (and numeracy) tasks
- The factors that underlie performance are largely, but not completely, the same in language and culture
- Literacy includes both learning to read and reading to learn:
  - Learning to read involves mastery of the components that underpin fluent and automatic reading
  - Reading to learn involves mastery of texts and tasks of increasing difficulty. To be placed at a level adults must get 80% or more of items at a level correct

Theoretical Framework:
A “Markets” Model of Skill

<table>
<thead>
<tr>
<th>Markets for skill:</th>
<th>Skill Demand</th>
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<tbody>
<tr>
<td>Education</td>
<td>quality of early childhood experience</td>
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<tr>
<td>Health</td>
<td>quantity of primary and secondary education</td>
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<tr>
<td>Social</td>
<td>quality and quality of literacy</td>
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<table>
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<tr>
<th>Outcomes</th>
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<tr>
<td>Health</td>
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Supply = skill stock + net skill flow from learning: lifelong, life-wide

An ideal statistical response: Canada’s adults skills data systems

<table>
<thead>
<tr>
<th>Demand for Essential Skills: HRDC’s ESRP</th>
<th>Supply of Essential Skills: Statistics Canada’s ALL survey</th>
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<tbody>
<tr>
<td>- Reading text</td>
<td></td>
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<tr>
<td>- Document Use</td>
<td></td>
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<tr>
<td>- Writing</td>
<td></td>
</tr>
<tr>
<td>- Numeracy (Math)</td>
<td></td>
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<tr>
<td>- Oral Communication</td>
<td></td>
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<tr>
<td>- Thinking Skills, including:</td>
<td></td>
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<td>- Problem Solving</td>
<td></td>
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<tr>
<td>- Decision Making</td>
<td></td>
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<tr>
<td>- Job Task Planning and Organizing</td>
<td></td>
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<tr>
<td>- Significant Use of Memory</td>
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<tr>
<td>- Finding Information</td>
<td></td>
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<tr>
<td>- Working with Others</td>
<td></td>
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<tr>
<td>- Computer Use</td>
<td></td>
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<td>- Continuous Learning</td>
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</table>

Primary Literacy

Document literacy

Numeracy

Speaking and listening

Problem solving

Teamwork

ICTL

Adult education and training participation
Where adult skill assessments have been conducted

IALS Coverage
- Canada
- U.S.
- Sweden
- Poland
- Swiss French
- Swiss German
- Ireland
- France
- Germany
- Netherlands

IALS Coverage
- Northern Ireland
- England
- Australia
- New Zealand

SIALS Coverage
- Chile
- Italy
- Slovenia
- Portugal
- Swiss Italian
- Hungary
- Czech Republic
- Belgium Flanders
- Denmark
- Norway
- Finland

ALL Coverage
- Canada
- U.S.
- Italy
- Nuevo Leon Mexico
- Switzerland
- Belgium Flanders
- Norway
- Bermuda

ALL-2 Coverage
- Netherlands
- Czech Republic
- Russia
- Hungary
- South Korea
- Australia
- New Zealand
- Slovenia
UNESCO’s LAMP Program in South East Asia:

- ALL data available for South Korea, Australia, New Zealand
- First round of LAMP data collection: Mongolia will join Canada, US, El Salvador, Morocco, Palestine, Niger and Kenya in implementing LAMP
- Second round of data collection: 30-50 countries distributed around the world. Looking for 6 or 7 countries in SE Asia
- Talking to China, India, Indonesia, Bangladesh, Malaysia, Pakistan, Vietnam, Philippines

How data from LAMP can be applied:

- To better understand the social and economic costs of low literacy at both the individual and macro level
- To understand the cost of inaction
- To argue for increased resources
- To allocate available funds optimally
- To target population sub-groups that are judged to be at risk
- To design more efficient and effective educational programs for adults
- To monitor trends in performance
- To market literacy programs

LAMP’s Objectives:

- To develop a COST EFFECTIVE METHODOLOGY
  - for assessing literacy in developing countries in a way that yields valid, reliable, comparable and interpretable data
  - that supports the derivation of a suite of products and services to meet a variety of uses and users
  - that minimizes development and implementation costs
- To provide RELIABLE, VALID, INTERPRETABLE (in educational, social and economic terms) and COMPARABLE DATA (within countries, between countries and over time)
  - to enable countries develop, evaluate and monitor national policies and programs by understanding determinants of skill and their relationships to outcomes, trends in performance and to identify vulnerable groups
  - to enable countries to supply data for international monitoring
- To BUILD CAPACITY
  - in the development and administration of assessments and household surveys:
    - TEST DESIGN
    - SCALING
    - ANALYSIS
  - in the use of literacy assessment data for policy and program development, monitoring and evaluation

What is LAMP?

Three linked products:
- LAMP: the Full Assessment
  - Reliable test of full skill range + background questionnaire + probability sample = direct estimates of literacy and numeracy + full covariates
- LAMP-Lite: A Reduced Assessment
  - Reliable test of lower range of literacy and numeracy skills + background questionnaire + sample = direct estimates of literacy and numeracy (but less detail in upper ranges of skill) + full covariates
- Model-based Estimates
  - Use covariance structure from international assessments
    - NALS, IALS, ALL, LAMP - to model skill distributions for every country in the world. Statistical model can be updated using small, low cost purposive sample

How the goals will be met: the LAMP Instruments

Background Questionnaire
Filter Module
Module A: Low skilled
- Prose, doc, numeracy, Locator items
Component Skills
Module B: High skilled prose
- Document, numeracy
- Book 1
- Book 2
LAMP Full Assessment: Minimum Final Sample Size Requirements

LAMP-Lite Assessment: Minimum Final Sample Size Requirements for the reduced design main assessment

LAMP “Reading to learn” measures:
The application of automatic and fluent reading to solve everyday problems involving print and/or numbers

- **Prose literacy** – the knowledge and skills needed to understand and use information from texts including editorials, news stories, brochures and instruction manuals.
- **Document literacy** – the knowledge and skills required to locate and use information contained in various formats, including job applications, payroll forms, transportation schedules, maps, tables and charts.
- **Numeracy** – the knowledge and skills required to effectively manage the mathematical demands of diverse situations.

Skill measures that are valid, reliable, comparable and interpretable in educational terms and that are linked to social, economic, health and educational outcomes at the individual and macro level

How the reading to learn items are administered:

- Respondents are given a test booklet
- Each booklet consists of a mix of prose literacy, document literacy and numeracy items
- Each test item consists of a stimuli (a text) and two or three tasks of differing difficulty
- The items are not timed

Development Methodology: Skill framework to enable measurement and interpretation

- Define domain
- Organize domain
- Identify task characteristics
- Identify and operationalize variables
- Validate variables
- Build an interpretative scheme

The Lamp grammar predicts item difficulty:

- Characteristics of both text and task underlie the relative difficulty of reading and numeracy tasks
- Task characteristics explain much more of difficulty than previously thought
- Familiarity is only important at very low levels of proficiency
- Current models explain over 90% of item difficulty, a fact that opens the way to efficient assessment and a way to interpret results
Prose Level 1: a simple question on a simple text

Prose Level 2: a question that contains medium difficulty text

Prose Level 3: a medium difficulty task on a medium difficulty text

Prose Level 5: a difficult question on a difficult text

Five levels of difficulty for the prose, document and numeracy domains

<table>
<thead>
<tr>
<th>Prose</th>
<th>Document</th>
<th>Numeracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>(1-22)</td>
<td>Low, with emphasis on reading a simple text and answering a straightforward question.</td>
</tr>
<tr>
<td>Level 2</td>
<td>(22-70)</td>
<td>Medium difficulty text, requires locating a single piece of information and simple inferences.</td>
</tr>
<tr>
<td>Level 3</td>
<td>(70-190)</td>
<td>High difficulty text, requires locating a single piece of information, making low-level inferences, and ignoring distracters.</td>
</tr>
<tr>
<td>Level 4</td>
<td>(190-500)</td>
<td>Very high difficulty text, requires locating multiple pieces of information, making high-level inferences, and ignoring multiple distracters.</td>
</tr>
<tr>
<td>Level 5</td>
<td>(500-825)</td>
<td>Extremely high difficulty text, requires locating multiple pieces of information, making complex inferences, and ignoring complex distracters.</td>
</tr>
</tbody>
</table>

Skills required involve:

- Proc 1: Simple measurements.
- Proc 2: Simple measurements.
- Proc 3: Advanced measurements.
- Proc 4: Advanced measurements.
- Proc 5: Advanced measurements.

**Document Level 1:**

- Level 1 documents are simple, with familiar contexts and information presented in a range of forms such as in numbers, texts, and drawings.
- Tasks in this level require respondents to enter information from personal knowledge and to identify and use simple information.

**Document Level 2:**

- Level 2 documents are medium in difficulty, with straightforward references to information and varying degrees of complexity in the content.
- Tasks in this level require respondents to enter information from personal knowledge, or synthesize information from tasks in Level 1, and provide numerous responses.

**Document Level 3:**

- Level 3 documents are high in difficulty, with complex references to information, multiple-feature matches, and integration of information.
- Tasks in this level require respondents to perform tasks in previous levels, ask respondents to perform tasks in previous levels, and make matches between the text and information.

**Numeracy Level 1:**

- Numeracy Level 1 is simple, with text consisting of simple, one-step operations such as arithmetic operations or understanding simple formulas or offering explanations for simple reasoning and interpretation skills, including simple percents such as 50%.
- Tasks in this level require the respondent to show an understanding of basic numerical content is explicit with little text. Tasks consist of simple, one-step operations such as arithmetic operations or understanding simple formulas or offering explanations for simple reasoning and interpretation skills, including common and simple percents such as 50%.

**Numeracy Level 2:**

- Numeracy Level 2 is medium in difficulty, with text consisting of one-step operations and simple percents such as 50%.
- Tasks in this level require the respondent to show an understanding of basic numerical content is implicit with little text. Tasks consist of one-step operations and simple percents such as 50%.

**Numeracy Level 3:**

- Numeracy Level 3 is high in difficulty, with text consisting of one- or two-step processes and estimations.
- Tasks in this level require the respondent to show an understanding of basic numerical content is implicit with little text. Tasks consist of one- or two-step processes and estimations.

**Numeracy Level 4:**

- Numeracy Level 4 is very high in difficulty, with text consisting of unfamiliar contexts where the mathematical content is implicit with little text. Tasks in this level require the respondent to show an understanding of basic numerical content is implicit with little text. Tasks consist of unfamiliar contexts where the mathematical content is implicit with little text.

**Numeracy Level 5:**

- Numeracy Level 5 is extremely high in difficulty, with text consisting of information of a more abstract nature represented in diverse ways, including in numbers, texts, and drawings.
- Tasks in this level require the respondent to show an understanding of basic numerical content is implicit with little text. Tasks consist of information of a more abstract nature represented in diverse ways, including in numbers, texts, and drawings.
Document Level 1: simple document, simple task

FEW DUTCH WOMEN AT THE BLACKBOARD

There is a clear percentage of women teachers in the Netherlands compared to other countries. In some of the other countries, the majority of teachers are women. However, these numbers do not represent the total population, the proportion remains small and women are not a majority everywhere.

Percentage of women teachers (kindergarten, elementary, and secondary)

Document Level 3: moderately difficult document and task

Fireworks in the Netherlands

Utilities of fireworks

Number of injuries

In millions of Canadian dollars

Document Level 5: difficult text and task

**Nurture Behavior**

1. **Names a situation or solving a problem in a real context**
   - Everyday life
   - Cross-cultural
   - Further learning

2. **Describes**
   - Identifying or locating
   - Activity
   - Order/sequence
   - Reason
   - Estimate
   - Compare

3. **Analyses**
   - Model
   - Interpreting
   - Communicating about

4. **Communicates ideas and solutions**
   - Information about mathematical ideas
   - Dimension and shape
   - Pattern and relationships
   - Data and chance

5. **Uses representational techniques in a range of ways**
   - Objects and pictures
   - Formulas and symbols
   - Diagrams and maps
   - Tables and charts

6. **Uses representations of a range of enabling knowledge, mathematical knowledge, and understanding**
   - Mathematical problem-solving skills
   - Numeracy skills
   - Written and formulaic

**Nurture Behavior and the New Results**

Nurture behavior is observed when people manage a situation or solve a problem in a real context. It involves responding to information about mathematical ideas that may be represented in a range of ways, it requires the activation of a range of enabling knowledge, factors, and processes.
LAMP “Learning to Read” Measures

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.

Degree of adaptation permitted:

- **Common items**: identical in all languages
- **Idiosyncratic items**: unique to a language
- **Hybrid items**: a mix of common and idiosyncratic elements
How the components are administered:

• Component items are administered using a desk calendar format
• There are two types of items: untimed and timed
• Timed items assess efficiency of processing – low rates overwhelm working memory

1. Digits Naming: common

2. Rapid Digits Naming: common

3. Lowercase Letter Naming: idiosyncratic

4. Uppercase Letter Naming: idiosyncratic

5. Rapid Letter Naming: idiosyncratic
6. Word Recognition: Hybrid

- go
- the
- and
- have
- there

7. Rapid Word Recognition: Hybrid

- be
- the
- and
- can
- back
- there
- table

8. Decoding

- kar
- fer
- hed
- male
- fite
- blud

9. Rapid Decoding: Idiosyncratic and optional

- rev
- han
- las
- dow
- reed
- boon
- dell

10. Vocabulary: common

11. Sentence Processing: common

- Cows eat grass. T F
- Water has teeth. T F
12. Passage Fluency: common

Honey is a sweet and pleasant natural food made by bees from the nectar of (cars / flowers). Wild bees live in the countryside and build their homes in hollow trunks of (trees / rocks). Other bees live in small wooden houses made by (people / laughter). The bees use wax to construct cells of six (noses / sides). All hives have some bees that fly to nearby fields to discover where there are (flowers / stoves). The scout bees return to the hive to tell other bees the exact place where the flowers have been (yelled / found).

Analysis of Components:
- Latent class analysis of components to identify patterns of strength and weakness in reading acquisition. Each class implies a need for a specific remedial curricula.
  - Example:
    - Class 1: Strong decoding and vocabulary
    - Class 2: Weak decoding, strong vocabulary
    - Class 3: Advanced ESL and other non-native speakers of English
    - Class 4: Intermediate ESL
    - Class 5: ESL low intermediates and reading disabled native speakers of English
  - Latent class analysis of each cluster identified in first stage latent class. Each second order cluster implies targeting of social marketing, differing diagnostic infrastructure, content and location of remedial programming.
  - First stage will support the development of efficient and effective tailored curricula and resource allocation decisions.
  - Second stage will inform marketing, service location, content and resource allocation decisions.

What is involved in LAMP participation:
- Set up a national study team (now)
- Attend 5 day study induction training (June 2006)
- Draft a national planning report and have it vetted by UIS (July 2006)
- Get approval and find money for pilot and main assessment i.e. domestic costs plus approximately $100,000 USD to cover international overheads for project management, quality assurance and international reporting
- Adapt instruments and procedures and have them vetted (October 2006)
- Conduct a pilot survey (500 yield with full design, 250 with reduced design) (January 2007)
- Score and process pilot data (February March April 2007)
- Adjust instruments and procedures and conduct main assessment (minimum 2250 yield with full design, 1000 with reduced design) (January 2008)
- Score and process main assessment data (February 2008 – July 2008)
- Release of international comparative and national results (December 2008)

Cost:
- LAMP costs roughly $250,000 - $500,000 including international overheads
- However, LAMP costs are highly variable from country to country. They depend on:
  - The LAMP design chosen
  - The sample size
  - The need to over-sample rare populations
  - The geographic dispersion of the population
  - What interviewers are paid
  - Whether existing staff resources can be diverted
- Countries should use LAMP costing template to determine a reliable first order approximation of cost

Financial support:
- Countries need to identify potential funding sources and amounts
- The World Bank and the regional development banks encourage folding funding into loans under monitoring and evaluation activities
- Grant money is also available from multilateral and bilateral donors, including UNESCO itself from EFA and LIFE programs
- UIS can assist countries in securing financial support for LAMP but the country needs to take the lead.
What Unesco Provides for LAMP:

- Full documentation
- Training in all key activities
- Quality assurance on all key elements
- An international report
- A fully documented dataset
- Transfer of key technologies:
  - Test development
  - Scaling
  - Analysis

The Unesco/UNICEF/World Bank Assessing Learning Outcomes Program (ALO)

- Goal: to improve the quality, quantity and relevance of student assessment data
- Multiple products:
  - A consumers guide to international and regional assessments
  - Linking item blocks for regional and national assessments
  - An assessment of literacy and numeracy at the end of primary
  - “Improvements” to existing international assessments:
    - Lower difficulty item blocks
    - Better background questionnaires
    - A method for sampling out of school population

Skill Demand from the Employers View:

To what extent are skill shortages a serious constraint to the operation and growth of their businesses?

Employers view skill as a major impediment

The distribution of skill: what we know about differences

Large differences in average skill and the distribution of skill exist
Comparative distributions of skills levels
Per cent of population aged 16 to 65 at each skills level, 2003

Components of Skill Flow:
- How much does skill gain and loss in adulthood change the overall skill profile?
- What factors are associated with skill gain?
- What factors are associated with skill loss?

Skill Change: Three countries did not change their prose literacy performance
- Similar trend also observed for document literacy
- Decline in U.S. and Italian speaking Switzerland
- Improvement in German speaking Switzerland

Equity and change in the social distribution of skill: 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

Equity and change in the social distribution of skill: Socio-economic gradients for three cohorts of adults
Relationship between age and literacy scores on the document literacy scale, with adjustment for level of education and language status, populations aged 16 to 65, 2003

Net skill gain and loss: Skills-age profiles controlling for educational attainment
Relationship between age and literacy scores on the document literacy scale, with adjustment for level of education and language status, populations aged 16 to 65, 2003

Net skill gain and loss: Prose literacy by age by educational attainment: Canada

Components of skill flow: Quality and Quantity of Secondary Graduates

- How big, in relative terms, are youth cohorts?
- What percentage of youth graduate from secondary?
- What is the relative quality of learning?

Youth aged 5-19 as a percentage of the population, 1990-2010: Thailand is young

Quality of skill flow from the initial education system: Canada rates near the top of the world in reading literacy, Brasil is far behind

Quality of skill flow: Distribution of student performance on the combined reading literacy scale: the quality of secondary graduates in Thailand is low

Quality of skill flow: Percentage of students performing at each of the proficiency levels on the combined reading literacy scale: Thailand’s performance is particularly poor at the top of the distribution
Quality of skill flow and equity: Differences in scores at 25th and 75th percentiles on the combined reading literacy scale: Thailand has average equity

More variation in student reading performance within than between schools

Sociocultural Gradients for Language Scores Grade 3, by Country, UNESCO OREALC Laboratorio: Brasil has high average, broad distribution, high inequality by SES

Skill and Individual Outcomes:

Do differences in skill matter?

...literacy explains a significant fraction of wage variability in Canada, but not in Sweden...

Labour market outcomes and skill: Probability of exiting unemployment by skills levels

Countries are ranked by the magnitude of the effect parameter associated with educational attainment


Equity and skill flows from adult learning: Likelihood of participation by literacy levels

Adjusted odds ratios showing the likelihood of adults aged 16 to 65 receiving adult education and training during the year preceding the interview, by document literacy levels, 2003

Countries are ranked according to the odds of persons who score at Level 4/5.

1. Odds estimates that are not statistically different from one at conventional levels of significance are reported as one in the figure. For the actual estimate and its corresponding significance, see Table 4.4 in the annex to this chapter.


Labour market outcomes and skill: Practice engagement at work by skills levels

Index scores of reading, writing and numeracy engagement at work on a standardized scale (centred on 2), by skills levels, labour force populations aged 16 to 65, 2003

Skills and Macro Outcomes:

- Do skills influence macro-economic outcomes?
- Do skills influence other macro outcomes – such as health?

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 level 4 and 5 do not translate into growth differences.
- Differences in the % at 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.
- 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.


Skills and health outcomes: Work-related health status by country

Per cent of adults in each of four work-related health status groups by country, populations aged 16 to 65, 2003.


Labour market outcomes and skill: Use of computers for task-oriented purposes by literacy skills

Mean index scores on a scale measuring the intensity of use of computers for specific task-oriented purposes, by prose literacy levels, populations aged 16 to 65, 2003.


Labour market outcomes and skill: Likelihood of being a high-intensity computer user by literacy skill levels

Adjusted odds ratios showing the likelihood of adults aged 16 to 65 of being high-intensity computer users, by prose literacy levels, 2003.


Labour market outcomes and skill: Likelihood of being a top income quartile earner by combined skill and user profiles

Adjusted odds ratios showing the likelihood of adults aged 16 to 65 of being a top income quartile earning, by combined literacy and computer user profiles, 2003.

Summary of what is known about literacy and numeracy:

- Big differences exist among countries in average skill levels and in how skill is distributed.
- These differences matter because they exert a profound influence on economic, educational, health and social outcomes realized by adults.
- These differences also matter at the macro level.
- Processes of social and technical change are expected to amplify the effects of these differences, particularly ICT’s.
- Countries can improve their skill levels but, to avoid skill loss, they need to ensure that skill demand is sufficient to soak up any new supply.

Information:

- Background on LAMP and ALO:
- Learning a Living: First results of the Adult Literacy and Life Skills Survey ([www.statcan.ca](http://www.statcan.ca)).
- The Adult Literacy and Life Skills Survey: New Frameworks for Assessment ([www.statcan.ca](http://www.statcan.ca)).