Measuring Inequalities: Focus on Methodological Approaches and Addressing Disparities

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Session 6
Objectives of the presentation

• to understand the basic concept and definitions on measuring disparities in education

• to introduce ways to analyze disparities in education aiming toward measuring achievements in EFA Goals

• to provide some examples of analysis helping the preparation of the national EFA 2015 Review Report
The principle of equal educational opportunities is at the core of the right to education.

Education should not only be available to all, but it has a crucial role in progress towards creating more inclusive and just societies.

Definitions of

- Disparity
- Equality
Concept and definitions

Disparity

• Numerical concept
• Reaching parity in education implies that the same proportion of learners from advantaged and disadvantaged groups in the respective age groups would enter/participate/achieve/attain a level of learning outcomes the education system (its different cycles)
• Gender disparity
Equality

• Equality in education means that all learners are treated equally in an education system, regardless of their differences in sex, wealth, ethnicity, nationality, caste, home language, religion, the place of residence, citizenship status, disability, etc.
## Measuring disparity, equality, equity

<table>
<thead>
<tr>
<th>Issues</th>
<th>Policy questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disparity</td>
<td>Is there any large difference?</td>
</tr>
<tr>
<td>Inequality</td>
<td>Is anyone excluded from equal treatment?</td>
</tr>
</tbody>
</table>

- **Policy questions**
  - Answers
  - Evidences
    - Indicators
    - Disaggregation
Most common statistical measures used to analyze disparities in Education

- Absolute gap
- Percentage
- Ratio
- Parity Index
- Range (max-min)
- Mean and Median
- Percentile and Quartile
### Most common statistical measures used to analyze disparities in Education

#### Table 1. Estimated adult illiterate population aged 15 and over, by sex and by region, 1995

<table>
<thead>
<tr>
<th></th>
<th>Estimated number of adult illiterates</th>
<th>Absolute gap (F-M)</th>
<th>Gender ratio (F-M)/F</th>
<th>% female</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Both sexes (Millions)</td>
<td>Male (Millions)</td>
<td>Female (Millions)</td>
<td>(Millions)</td>
<td></td>
</tr>
<tr>
<td>WORLD TOTAL</td>
<td>884.7</td>
<td>320.0</td>
<td>564.7</td>
<td>244.7</td>
<td>63.8</td>
</tr>
<tr>
<td>Developing countries of which:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>871.8</td>
<td>315.0</td>
<td>556.7</td>
<td>241.7</td>
<td>63.9</td>
</tr>
<tr>
<td>Arab States</td>
<td>65.5</td>
<td>24.3</td>
<td>41.2</td>
<td>16.9</td>
<td>62.0</td>
</tr>
<tr>
<td>Latin America/Caribbean</td>
<td>42.9</td>
<td>19.4</td>
<td>23.4</td>
<td>4.0</td>
<td>54.7</td>
</tr>
<tr>
<td>Eastern Asia/Oceania</td>
<td>209.9</td>
<td>60.4</td>
<td>149.5</td>
<td>89.1</td>
<td>71.2</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>415.5</td>
<td>159.4</td>
<td>256.1</td>
<td>96.7</td>
<td>61.6</td>
</tr>
<tr>
<td>Developed countries</td>
<td>12.9</td>
<td>5.0</td>
<td>7.9</td>
<td>2.9</td>
<td>61.6</td>
</tr>
</tbody>
</table>

*Source: Compendium of statistics on illiteracy, SRS n° 35, 1995.*
• The **absolute gap** (column 4) defined as the difference between the absolute number of male and female illiterates

• The **percentage of female illiterates** in the total number of illiterates (column 5)

• The **sex ratio** (column 6), similar to the sex ratio used in demography, represents the ratio between the number of male and female illiterates
  - Can also be expressed as a percentage, giving the number of illiterate men per 100 illiterate women

• the **relative gap** given by the formula \((F-M)/F \times 100\) (column 7), which indicates the proportion of illiterate women that should be made literate to achieve parity with men
GPI for GER in secondary education
Trends in sub-national disparities
Mean

• Different kinds of MEAN – arithmetic, geometric, harmonic
• Arithmetic Mean –
  • the sum of all the values in a dataset divided by the number of items in the list
• Geometric Mean –
  • a collection of positive data is defined as the $n^{th}$ root of the product of all the members of the data set, where $n$ is the number of members.
  • Useful in finding the average of percentages, ratios, indexes or growth rates
Mean

- Mean is used to compute all the value of the data
- The mean of the data set is unique, not necessarily one of the data values.
- The means is used in computing other statistical measures such as variance
- Mean can not be computed for an open-ended distribution
- The mean is affected by outliers (extremely high or low value)
Mean, Median, Mode

Median

- The median is used to determine whether the data values fall into the upper half or lower half of the distribution
- To find the average of an open-ended distribution
- The median is affected less than the mean by outliers

Mode

- The mode is used when the most typical case is desired
- The mode is the easiest average to compute
- The mode can be used when the data are nominal
### Mean, Median, Mode

<table>
<thead>
<tr>
<th>Data</th>
<th>Measures</th>
<th>Formula</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Mean</td>
<td>=AVERAGE(A2:A11)</td>
<td>6.1</td>
</tr>
<tr>
<td>8</td>
<td>Median</td>
<td>=MEDIAN(A2:A11)</td>
<td>6.5</td>
</tr>
<tr>
<td>7</td>
<td>Mode</td>
<td>=MODE(A2:A11)</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>Maximum</td>
<td>=MAX(A2:A11)</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>Minimum</td>
<td>=MIN(A2:A11)</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>Range</td>
<td>=Maximum - Minimum</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Variance</td>
<td>=VAR(A2:A11)</td>
<td>3.4</td>
</tr>
<tr>
<td>5</td>
<td>Std Dev</td>
<td>=STDEV(A2:A11)</td>
<td>1.9</td>
</tr>
<tr>
<td>4</td>
<td>Coe Variation</td>
<td>= Std Dev/ mean</td>
<td>30%</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 2.34. Pupil/teacher ratio in primary education, by region (1990 and 2000): median values and variation within regions (in parentheses, the number of countries included in each region)

Source: GMR 2003/4

Source: GMR 2010
Measures of position

Percentile
- Percentiles are the position measured to indicate the position of an individual in a group.
- 90 percentile – a value such that at 90% of the observations are less than this value and that at 10% are greater.

Quartile
- Quartile – value of the variable which one quarter (lower quartile – 25 percentile) or three quarter (upper quartile – 75 percentile) of a distribution lie.
Measures of position

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>1</td>
<td>Data</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td></td>
<td>=percentile(A1:A5, 0.75)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td></td>
<td>Syntax</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td></td>
<td>PERCENTILE(array,k)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td>=quartile(A2:A5,3)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td>Syntax</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td>QUARTILE(array,quart)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>0 Minimum value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1 First quartile (25th percentile)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>2 Median value (50th percentile)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>3 Third quartile (75th percentile)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>4 Maximum value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td>Description (Result)</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td>3.25</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>75th percentile (third quartile)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>75 percent of the variables are below the result</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 3.13: Distribution of countries by GIR, medians, quartiles and highest and lowest deciles, by region, 2001

Source: GMR 2005

Notes: The boxes represent the range in which the middle 50% of countries are found. The number of countries providing data is given in parentheses for each region.
Figure 2.36: There are large gaps in learning achievement across countries.

Distribution of TIMSS mathematics scale score for eighth grade students in 2007.

Source: GMR 2010
Parity Index (PI)

- Parity Index (PI) is most widely used index in assessing differences of two groups especially in gender

\[
PI = \frac{\text{Value of indicator for disadvantage group}}{\text{Value of indicator for advantage group}}
\]

- Gender Parity Index (GPI) is calculated as the ratio of the selected indicator’s value for girls divided by that for boys

\[
GPI = \frac{\text{Value of indicator for Girls (Female)}}{\text{Value of indicator for Boys (Male)}}
\]

- A value of less than one indicates the difference in favor of boys, whereas a value close to one indicates that parity has been achieved
- Gender parity is sometimes considered to have been attained when the GPI lies between 0.97 and 1.03*

*Global monitoring report 2003/4
# Gender Parity Index (GPI)

## Gender disparity in Literacy

<table>
<thead>
<tr>
<th>GPI&lt;sub&gt;Literacy&lt;/sub&gt; =</th>
<th>Adult Female Literacy Rate</th>
<th>Adult Male Literacy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adult Female Literacy Rate 86.9</td>
<td>Adult Male Literacy Rate 93.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GPI</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.93</td>
<td>GPI = 0.97 to 1.03 -&gt; Parity achieved</td>
</tr>
<tr>
<td></td>
<td>GPI &gt; 1.03 -&gt; Female’s advantage</td>
</tr>
<tr>
<td></td>
<td>GPI &lt; 0.97 -&gt; Male’s advantage</td>
</tr>
</tbody>
</table>
## Unadjusted GPI

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>GPI</td>
<td>50/100=0.5</td>
<td></td>
</tr>
</tbody>
</table>

(0.5 units away from parity and **half** below than male)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>GPI</td>
<td>75/50=1.5</td>
<td></td>
</tr>
</tbody>
</table>

(0.5 units away from parity, but **two-third** lower than female, **not half**

---

*Regional Technical Workshop: National EFA 2015 Reviews in Asia-Pacific*
Adjusted GPI

- When the ratio of female to male (unadjusted GPI) values of a given indicator is greater than 1.00
- Calculate the ratio of male to female values and then subtracted by 2.
- For example: if GER for males is 33% and 66% for females, the ratio to male to female GER is 0.5
  - For instance, GPI = Female rate/Male rate
  - but for Adjusted GPI = 2 - (Male GER/Female GER)
- Then subtracting 0.5 from 2 gives an adjusted GPI of 1.5, while unadjusted GPI would show a result of 2
### Adjusted GPI

<table>
<thead>
<tr>
<th>GER (Male)</th>
<th>33</th>
</tr>
</thead>
<tbody>
<tr>
<td>GER (Female)</td>
<td>66</td>
</tr>
<tr>
<td>GPI</td>
<td>$\frac{66}{33} = 2$</td>
</tr>
</tbody>
</table>

\[
AGPI_{\text{GER}} = 2 - \left( \frac{\text{GER}_{\text{male}}}{\text{GER}_{\text{female}}} \right) = 2 - \left( \frac{33}{66} \right) = 2 - 0.5 = 1.5
\]

Figure 5.2.2 Global GPI up from 0.74 favouring men to 1.08 favouring women since 1970

Adjusted gender parity index for gross enrolment ratio in tertiary education, 1970–2009

- North America and Western Europe
- Central and Eastern Europe
- Latin America and the Caribbean
- Central Asia
- World
- East Asia and the Pacific
- Arab States
- South and West Asia
- Sub-Saharan Africa

Note: GPI is adjusted
Source: UNESCO Institute for Statistics
Other useful statistical measures used to analyze disparities in Education

- The **McLoone Index** – measure the size (as a percentage of the median) of the gap of those observation below median.
- The **Coefficient of Variation** - Allows the comparison of standard deviations (variation in data set) for different groups
- The **Gini Coefficient** - measures the inequality among values of a frequency distribution (for example levels of income).
- **Theil’s T Statistic** - a statistical measure usually used for economic inequality
Other useful statistical measures used to analyze disparities in Education

- Educational Equity and Public Policy, 2007, UNESCO Institute for Statistics
- The Theoretical Basics of Popular Inequality Measures, Inequality Project, Travis Hale, University of Texas
  http://www.google.fr/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=3&ved=0CDUQFjAC&url=http%3A%2F%2Futip.gov.utexas.edu%2Ftutorials%2Ftheo_basic_ineq_measures.doc&ei=9iqCUrTNOobEtAatg4GoBg&usg=AFQjCNEPaPPvelf2sBjpwVXoFd6rqS7wYg
- Measuring Resource Inequality: The Gini Coefficient, Scholar Commons, University of South Florida
  http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=1032&context=numeracy
- Measuring Inequality: Gini Coefficient, Theil’s T Statistic, Poverty Reduction and Equity, World Bank
- Situations and Definitions: Coefficient of Variation, Institute for Digital Research and Education, UCLA
  http://www.ats.ucla.edu/stat/mult_pkg/faq/general/coefficient_of_variation.htm
- Nicholas Rohde, 2007, Derivation of Theil’s Inequality Measure from Lorenz Curves, School of Economics, The University of Queensland Brisbane
Measuring reaching the unreached groups

• Introduced in GMR 2010

• Deprivation and Marginalization in Education (DME) data measures:
  • ‘Education poverty’ – less than 4 years at school
  • ‘Extreme education poverty’ – less than 2 years at school

• DME provides a tool for:
  • disaggregating by group characteristics
  • decomposing the ‘bottom 20%’

• Beyond the numbers of years in school – looking at disparities in learning achievement
Measuring reaching the unreached groups

- **Gender**: male/female
- **Geographical**: provinces, districts, urban/rural, less developed/more developed geographic areas
- **Social**: class/caste system, occupation, socio-economic status, legal status (birth registration, citizenship)
- **Wealth/poverty**: family/household income + value of assets
- **Ethnic/linguistic**: ethnicity, religious affiliations, language minorities
- **Vulnerable**: orphans, working children, children affected by HIV/AIDS, children affected by conflict (IDPs), very poor children, migrants
- **Disabilities**: physical and mental
- **Education sources**: including private/public/faith-based, formal/non-formal/community based
Figure 3.4: The education inequality tree
Average number of years of education of the population aged 17 to 22 by wealth, gender, location, and other selected drivers of marginalization, latest available year

The wealth effect: People from the poorest households who are in education poverty

The gender effect: Girls from the poorest households who are in education poverty

Average number of years of education: fewer than 6 years

Source: GMR, 2010
Figure 3.6: Many countries have large regional disparities in education poverty

% of population aged 17 to 22 with fewer than four years of education, by region, selected countries, latest available year


Source: GMR, 2010
Exclusion in education does not only mean “out-of-school children.”

- Exclusion from having the **life prospects** needed for learning;
- Exclusion from **entry into a school** or an educational programme;
- Exclusion from regular and **continuing participation** in school or an educational programme;
- Exclusion from **meaningful learning** experiences;
- Exclusion from a **recognition** of the learning acquired;
- Exclusion from contributing the learning acquired to the **development of community and society**
<table>
<thead>
<tr>
<th>Who experiences exclusion?</th>
<th>How does the exclusion occur?</th>
<th>Existing policies and programmes that are intended to address the exclusion</th>
<th>Existing measures and arrangements in education that may have impacts on the exclusion</th>
<th>Existing public policies, service provisions and programmes outside education that may have impacts on the exclusion</th>
<th>Gaps, obstacles, contradictions, dilemmas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnic minority learners in remote areas</td>
<td>In the course of primary school. Exclusion from regular and continuing participation</td>
<td>Cannot afford going to primary school.</td>
<td>Tuition free primary education.</td>
<td>Household contributions in the financing of primary education.</td>
<td>NIL.</td>
</tr>
<tr>
<td></td>
<td>Need to work in the morning to help families eat, thus always late to school.</td>
<td>Programme to raise the awareness of parents about “parenting.”</td>
<td>Schools start at 8am.</td>
<td>NIL.</td>
<td>Obstacles: the costs of textbooks, notebooks, pencils, clothes and shoes, drinking water and lunch, which households are currently responsible for. Dilemma: the government does not have the financial capacity to take on these costs.</td>
</tr>
<tr>
<td></td>
<td>Poor quality of learning; high teacher turn-over rates due to the remoteness of the area; insufficient learning materials.</td>
<td>Financial incentives for teachers who work in remote areas.</td>
<td>Teacher recruitment and deployment; teacher remuneration and benefits. Learning material distribution system.</td>
<td>NIL.</td>
<td>Gaps: insufficient availability of teachers who are willing to work in remote schools. Insufficient availability of learning materials.</td>
</tr>
<tr>
<td></td>
<td>Many repeat grades and lose interest in school.</td>
<td></td>
<td>Grade structure and progression system based on learning outcomes.</td>
<td>NIL.</td>
<td>Contradiction: the grade progression of learners is defined by the assessment of their learning made by teachers, but the teachers are not able to appropriately assess the learning acquired by the learners due to communication barriers.</td>
</tr>
<tr>
<td>Entry to lower secondary school.</td>
<td>Exclusion from the recognition of the learning acquired</td>
<td>Many do not pass the primary education completion exam required for entry to lower secondary school.</td>
<td>Primary education completion exam.</td>
<td>NIL.</td>
<td>Obstacles: primary education completion exam.</td>
</tr>
<tr>
<td></td>
<td>Many attend community-based non-formal education programmes, but those certificates are not valid for entry to lower secondary school.</td>
<td></td>
<td>Requirements for lower secondary school entry. Non-formal learning recognition system. Primary education completion exam given only in formal primary schools.</td>
<td></td>
<td>Gap: formal-non-formal equivalency. Obstacle: Requirements for lower secondary school entry. Contradiction: Primary education completion exam is required for entry to lower secondary school, but the exam is not accessible for everyone.</td>
</tr>
<tr>
<td></td>
<td>School is in town, but the transportation is irregular. Also, people of the community do not like going to town as they often experience negative and discriminatory treatment.</td>
<td>Geographical distribution of lower secondary schools in the country.</td>
<td>Transportation services in the area. Anti-discrimination policy.</td>
<td></td>
<td>Obstacles: irregular transportation; discrimination by people in town. Gaps: Regular transportation services; lower secondary schools near where the learners live. Dilemmas: financially not feasible to construct a lower secondary school in every village.</td>
</tr>
<tr>
<td></td>
<td>Cannot afford going to a lower secondary school.</td>
<td>Selective scholarship scheme for girls in rural areas to attend lower secondary school.</td>
<td>Household contributions in the financing of lower secondary education.</td>
<td></td>
<td>Gaps: financial support to ethnic minority boys in rural areas, as well as to ethnic minority girls in rural areas who did not obtain the scholarship for girls in rural areas.</td>
</tr>
</tbody>
</table>
References

- In pursuit of equity in education using international indicators to compare equity policies, Hutmacher, W.; Cochrane, D.; Bottani, N. (Eds.) (2001)
- *Guidelines for EFA: Monitoring, Evaluation and Assessment*: Identifying and Reaching the Unreached, (UNESCO)
- *Systematic monitoring of Education for All*: Training modules for Asia-Pacific
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- Tanaporn Perapate (UNICEF EAPRO)
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Thank you!
Some interesting examples of education disparities in Asia-Pacific
Analysis of disparity on EFA progress examined
4 main drivers of inequity in the region

1. Poverty
2. Geographical location
3. Gender differences in achievement of MDGs
4. Others drivers: ethnicity, language, religion, disabilities, and caste
Disparities in Net Attendance Rates: Primary - and - Secondary

EFA Goal 1 - Expand early childhood care and education (ECCE)

Key Indicators

- GER in Early Childhood Care and Education (ECCE) programs
- Per cent of New Entrants to Primary Grade 1 who have attended some form of Organized ECCE programs
- Private Centre Enrolment as percentage of total enrolment in ECCE programs
- Per cent of Under-Fives Suffering from Stunting
- Per cent of Household Consuming Iodized salt
- Per cent of trained teachers in ECCE programs
- Public expenditure on ECCE programs as percentage of total public expenditure on Education
Gross enrolment ratio (GER) in Early Childhood Care and Education (ECCE) programmes
Indonesia

Source: Indonesia EFA MDA dataset
Relationships between NER in Primary and % of Iodized Salt Consumption, Mongolia and Thailand, 2005-2006

Source: MICS 2005-2006 (Thailand and Mongolia)
Goal 2 - Provide free and compulsory primary education for all

Key Indicators

- GIR in Primary Education
- NIR in Primary Education
- GER in Primary Education
- GER in Secondary Education
- NER in Primary in Education*
- NER in Secondary Education
- Dropout rate
- Repetition Rate by grade in Primary Education
- Survival rate to grade 5*
- Transition rate

*Indicates MDG indicator
Enrolment by Year and Age Status
Vanuatu, 2011
Source: Vanuatu, EMIS, 2012

Enrolment by Year and Age Status
Vanuatu, 2011
Source: Vanuatu, EMIS, 2012

Under-Age  Official Age  Over-Age
Enrolment by Year and Age Status

Vanuatu, 2011

Source: Vanuatu, EMIS, 2012

%Under-Age  %Official Age  %Over-Age
Over-Age Enrolment by Year
Vanuatu, 2011
Source: Vanuatu, EMIS, 2012

%Over-Age 1yr
%Over-Age 2 yrs+
Percent distribution of the de facto female household populations age 6 and over by highest level of schooling attended or completed and median grade completed, according to background characteristics, Timor-Leste 2009-10

Somewhat – significant correlation

Source: Timor-Leste DHS 2009-2010
Gross Enrolment VS Net Enrolment Rate in Primary, Selected countries, 1999-2011

Source: UIS Online Database
http://www.uis.unesco.org/Pages/default.aspx
Gross enrolment ratio (GER) in primary education
sub-national disparities

Source:
KHM_EMIS office, Planning Department
MMR_DEPT and DBEs
Lao PDR_National EFA MDA, 2007
IDN_MoNE Schools Only
MYS_MOE, Pendidikan Islam, JPS
Goal 3 – Promote learning, skills for young people and adults

Key Indicators

• Youth Literacy Rate (15-24 years)*
• GER in Technical and Vocational Education and Training (TVET) by vocation program
• Technical Vocation Education and training teachers classified by qualification
• Designated curriculum time in Education system to develop children and young people’s knowledge, skills, and attitude for health (ISCED) from curriculum development center (MoE)
• Transition rate between primary and secondary to higher education system.
• Participation rate of young people and adults in accredited, NFE programmes

* Indicates MDG indicator
Youth and Adult Literacy Rates, 2004-2006

Source: Global Monitoring Report, 2010

<table>
<thead>
<tr>
<th>Country</th>
<th>Youth (15+ yr)</th>
<th>Adult (15-24 yr)</th>
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<tbody>
<tr>
<td>Cambodia</td>
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<td>Indonesia</td>
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<td>Pakistan</td>
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<td>Sri Lanka</td>
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</tbody>
</table>

Percentage

Male: ⊡
Female: °
Gross Enrolment Ratio in Lower Secondary Education, Cambodia, 2000-2006

Gross Enrollment Ratio in Lower Secondary Education 2000-2006
Whole Kingdom, Urban, Rural, Remote Areas

Reference 100%

Inequality Increase

Cambodia
Urban
Rural
Remote


Percent
Goal 4 – Increase adult literacy by 50 per cent

Key Indicators

• Adult literacy rate (15 years and above)
• Youth Literacy Rate (15-24 years)
• Gender Parity Index for Adult Literacy
• Public expenditure on Literacy and NFE as a percentage of total public expenditure on education
Tested Functional Literacy
Lao PDR by Ethnicity, 2001

- Female 15-59 yr Tai-Kadai: 40.1%
- Male 15-59 yr Tai-Kadai: 55.9% (16% difference)

- Female 15-59 yr Austroasiatic: 22.7%
- Male 15-59 yr Austroasiatic: 36% (13% difference)

- Female 15-59 yr Sino-Tibetan: 16.3%
- Male 15-59 yr Sino-Tibetan: 26.4% (10% difference)

- Female 15-59 yr Hmong-Yao: 11.9%
- Male 15-59 yr Hmong-Yao: 38.5% (27% difference)

Source: Lao Literacy Survey
Literacy rate of 15-19 year olds by Ethnic group, Malaysia, 1970-2000

Source: Malaysia Achieving the Millennium Development Goals, Economic Planning Unit, Prime Minister’s Department, Malaysia, 2005, P. 70
Goal 5 – Achieve gender parity by 2005, gender equality by 2015

Key Indicators

• GPI for Literacy
• GPI for GER/NER in ECCE
• GPI for GIR/NIR in Primary Education
• GPI for GER/NER in Primary Education
• GPI for GIR/NIR in Secondary Education
• GPI for GER/NER in Secondary Education
• GPI for Survival rate to grade 5
• GPI for Transition rate to Secondary Education
• % of Female enrolment in primary education, secondary education, TVET
• % of Female teachers in primary education, secondary education, TVET
• % of repetition of girls and boys in primary and secondary levels
• Number of education officers in management position by gender
• Proportion of male and female participating in school management
Gender Parity in Net Enrolment Ratio in Secondary Education
Myanmar, 2005-2008

Gender Parity Index
- Girls significantly disadvantaged
- Girls disadvantaged, but close to parity
- Gender Parity Achieved
- Boys disadvantaged, but close to parity
- Boys significantly disadvantaged

Source: Myanmar provisional EFA MDA dataset
Gender parity in net enrolment ratio in secondary education

Mekong Sub-Region

**Gender Parity Index**
- Girls significantly disadvantaged
- Girls disadvantaged, but close to parity
- Gender Parity Achieved
- Boys disadvantaged, but close to parity
- Boys significantly disadvantaged
- Missing Data

Source: EFA GMR 2008
Viet Nam

Net attendance ratio of female children of secondary school age attending secondary or higher school
Net Enrolment Rate, Primary, gender disparity
Lao PDR vs East Asia and the Pacific, 1999-2011

Source: UIS Online Database: http://www.uis.unesco.org/Pages/default.aspx

Gradual improvement

Net Enrolment Rate, Primary, gender disparity
Mongolia vs East Asia and the Pacific, 1999-2011

Source: UIS Online Database: http://www.uis.unesco.org/Pages/default.aspx

Reverse trend!
% of Female/Male Enrolment, by Level
Vanuatu, 2011

- Female
- Male

Vanuatu
Torba
Tafea
Shefa
Sanma
Penama
Malampa

ECE
Primary
Secondary

0%  25%  50%  75%  100%
Goal 6: Improve the quality of education

Key Indicators

- Percentage of Primary school teachers having the required academic qualification
- Percentage of school teachers who are certified to teach according to National standards for ECCE, Primary, secondary, NFE
- Pupil-Teacher Ratio (PTR) for primary education and secondary education
- Pupil-Class ratio (PCR) for primary education and secondary education
- Pupil-Textbook ratio (PBR) for primary education and secondary education
- Public expenditure on education as per cent of total government expenditure
- Public expenditure on education as per cent of Gross National Product (GNP)
- Public expenditure on Primary and Secondary education per pupil as Per cent of GNP per capita
- Percentage of schools with improved drinking water sources
- Percentage of schools with adequate sanitation facilities
- Examination results
Literacy Achievement by Language Group, Cook Islands

Source: Country report, Regional Meeting of National EFA Coordinator, Cook Islands, 2010

CI Maori Below standard
CI Maori At/Above standard
English Below standard
English At/Above standard
Primary Education Pupil-Teacher Ratio by qualification
Vanuatu, 2007

- Pupil-certified teacher ratio
- Pupil-qualified teacher ratio
- Pupil-teacher ratio (PTR)

Source: Vanuatu, MEYDT, Digest of Education Statistics, 2007
Lessons Learnt on Data

• Life Skills had the weakest data as a Goal. Countries did not include details in their Nat’l MDA Reports or data sets

• Very weak data related to Water & Sanitation in schools

• Very poor data on learning achievement. Lack of willingness to share results from national examinations

• Amongst hard to reach - Disabilities is weakest, followed by ethnic minorities in terms of lack of data. Very few countries report on Poor and their education status

• Data is often available but ability to analyze and use data for advocacy or policy decision making still weak