Guidelines for preparation of the EFA Mid-Decade Assessment Report

Myanmar National Workshop towards preparations for the EFA Mid-Decade Assessment
Yangon, Myanmar

Purpose of Report

- The most important purpose for producing the Mid-Decade Assessment report is to serve national education policy concerns. These findings are crucial in determining a country's effectiveness in achieving EFA and the MDGs.

National Education Policy

Education for All

Millennium Development Goals

Variables of the Report

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Demand</th>
<th>Resources</th>
<th>Access and Participation</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concepts &amp; Indicators</td>
<td>Primary school-age population</td>
<td>Adult literacy</td>
<td>Facilities</td>
<td>Effort</td>
</tr>
<tr>
<td>Policy goals &amp; targets</td>
<td>Primary school-age population</td>
<td>Adult literacy</td>
<td>Facilities</td>
<td>Effort</td>
</tr>
<tr>
<td>Trends, changes</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Regions/districts</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Public/Private</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Urban/rural</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Pop. subgroups, sex, language, etc.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Types of Indicators

More on Indicators

- Select indicators based on goals and targets
- Refer to benchmarks to gauge success or failure
- Indicate the nature, direction, and extent of the needed change

Appropriately selected indicators assist in decision-making process
Having selected the indicators and the variables for analysis, the next step is to design a report, starting with content outline and layout. The outline document also becomes a work plan document, as it will indicate materials that have to be prepared.

**Good Design Features**

- The main purpose of the MDA report is to communicate policy-relevant developments to the busy policy makers.
- The report must compete with many other duties and materials that the policy-makers have to deal with on a daily basis.
- The reader should be stimulated to flip through the pages and acquire an understanding of the significant developments with regard to the EFA in the country.
- The readers must be able to assimilate the information as quickly and effortlessly as possible.

**Readability**

- To attain such ‘readability’, the report should be divided into two main parts:
  1. Presenting the main findings
  2. Supporting technical reference materials
- In this way, presentation can be focused on the policy-relevant findings, free from distracting clutter.
- Simultaneously, for those who need to verify and explore the foundation for the findings, the supporting information would be available in the appendix or a separate document.

**Content Outline**

Each goal area can be considered a chapter, subdivided into subsections consisting of the analysis of the indicators according to the respective analytic variables.

**Standard indicators report outline**

1. Executive summary
2. Preface, acknowledgements, etc.
3. Introduction and background
4. National goals and targets for education
5. Population growth and demand for education
   - population policy
   - national trend and changes
   - regional disparities
   - urban-rural disparities
6. Access to primary school education
   - admissions policy and obstacles
   - trends
   - regional disparities
   - public/private sector
   - urban-rural contrasts
   - gender disparities etc.
7. Participation a), b), c)...
8. Efficiency of the educational system a), b), c)...
9. Summary of Findings
10. Appendices
Good Design Characteristics

Good design features which make an informative presentation include the following characteristics:
- Attractive display
- Clear message
- Memorable impressions
- Relevant information
- Succinct

General Editorial Suggestions

Much effort and discipline must be put into the design and editorial work to make the presentation readable
- Summarise policy-relevant conclusions in short sentences and paragraphs
- Highlight the main message of the findings
- Trim and redesign tables and diagrams to highlight relevant patterns
- Include essential information; exclude non-essentials
- Relegate technical explanations to the appendix/footnotes
- The appendix should contain supporting information

The Layout of Presentation Materials

Generally, the presentation of the respective indicators should include the following essential information:
- Title: indicator name by analytical variable name
- Non-technical definition of the indicator
- Head-line summary of findings
- Brief history, policy and findings
- Display data table
- Display diagrams
- Data years and coverage
- Data source acknowledgement

One Page Layout Example

Gross Enrolment Ratio by Sector
Republic of Utopia, 1999

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>95.2</td>
<td>77.1</td>
</tr>
<tr>
<td>104.2</td>
<td>79.7</td>
</tr>
</tbody>
</table>

Mountains
Areas
Central
Plains
Coastal
Regions
Urban

Gross Enrolment Ratios in Primary by Sector
Republic of Utopia, 1999

The net enrolment ratio in primary shows the percentage of children in school who are in the age bracket of official primary school age. The following examines the comparison of the net enrolment ratio across different sectors.

According to this, the central plains region has the highest net enrolment ratio in primary grades compared to other sectors followed by mountainous areas. The net enrolment ratio in the coastal regions is the least compared to others. The urban areas have the second from the bottom. This sounds opposite to what we might think. Further investigation may be necessary to find out why coastal and urban regions have low net enrolment ratios and central plains and mountainous regions have the highest figures.

Another observation from the figure below has to do with gender differences. The central plains region has, not only the highest gross enrolment ratio for girls but also the net enrolment ratio for girls is higher than that of boys. Another observation is the fact that this region has net enrolment ratios over 100% both for boys and girls signifying that there are over-aged children attending primary grades in this area.

Gross Enrolment Ratio:
Ratio between the number of pupils enrolled in first level education and those of official school-enrolment age

Data required:
Population estimates of children of official school-enrolment age in the first level of education and total number of children enrolled in the first level of education

Analysis & Presentation

Consider all relevant sub-groups for further analysis

<table>
<thead>
<tr>
<th>Analytical variables</th>
<th>Data table indicator by policy targets</th>
<th>Bar graph comparing actual values against target values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trends and changes</td>
<td>Calendar years</td>
<td>Bar graph if only two or three years, otherwise trend line graphs or stacked area on a time-axis</td>
</tr>
<tr>
<td>Administrative units</td>
<td>Regions and districts</td>
<td>Density-plot on geographical map; horizontal bar graph along a ranked regions and national sub-grouping</td>
</tr>
<tr>
<td>School ownership/authority</td>
<td>Public/private, church/non-church-related, etc</td>
<td>Bar graph for differences, pie chart for relative distribution</td>
</tr>
<tr>
<td>Population sub-groups</td>
<td>Male-female gaps and ratios, language groups, etc</td>
<td>Bar graph for differences, pie chart for relative distribution, demographic pyramid for age and gender structure</td>
</tr>
</tbody>
</table>
A note on software

- Presentation materials are basically data tables and charts, both of which are designed together.
- Usually, spreadsheet programs (e.g., Excel) are available for the preparation of these kinds of presentations.
- DevInfo provides a simple and powerful tool for presentation.
- These can be imported into platforms like MS PowerPoint to prepare a slide presentation or MS Word to prepare a report.

Note: all reports, software, tables and graphs are only as good as the data presented!!

Presentation Data Tables

The design of display tables should aim at easy interpretation of the main patterns.

- Include essential information for highlighting policy-relevant trends and contrasts, not minute details that will obscure the main message.
- Present net results, relegating the detail tables used for calculation to a separate technical reference section or document.
- Highlight magnitude of differences between comparative groups or categories of the analytical variables. In some cases, even non-existence of differences may be significant from the perspective of policy formulation.

General Principles

- Well-designed diagrams are those that enable the reader to ‘see’ directly both the overall patterns and details.
- They are amenable to comparisons and analysis.
- Special diagrams show subject-specific structures, like the demographic pyramid and thematic maps.

Main Purpose

- The main purpose of graphs is to visually impart information that cannot be easily read from a data table.
- It would be very difficult to readily ‘see’ trends and contrasts straight from a visual inspection of a data table covering many years with regard to school-age population, enrolment of boys and girls respectively, as well as the number of children out of school.

Tables can be confusing

“A chart says more than a thousand tables.”
A Graph can paint a clearer picture

Selecting Type of Graph

In general, the optimal type of graph depends on a number of factors:

- The appropriateness of type of graphs, such as bar graphs and line graphs, are determined by the quantitative characteristics of the variables (nominal, ordinal, interval and ratios, etc.)
- The objective of analysis determines what comparisons are important (the policy-relevant analytical variables)
- The complexity of the graph should be designed appropriately for the target readers

Bar Graphs

- Bar graphs compare the values of different items in specific categories or at discrete points in time, e.g. survival rates for boys and girls respectively, compared across grade levels and/or between those in urban and rural areas.
- Simple both to create and read
- Used to illustrate variable values which are distinct (i.e. qualitative variable)
- Useful for showing frequencies, sums and averages

Bar Graph Example

Line Graphs

- Line graphs show the progression of values over time, e.g. the number of schools in operation over time; gross and net admission rates for boys and girls respectively, over time.
- Easier for the eye to follow curves for boys and girls respectively, over time.
- Easier to get a clearer picture of the development over time
- Good for answering the following questions:
  - In what periods were the changes large?
  - When were the turning points?
**Line Graph Example**

- **X-axis:** Year (1978-2004)
- **Y-axis:** School Age Population
- **Legend:** Boys in School, Girls in School, Children out of School
- **Source:** MOE, Republic of Utopia: 2005

**Area graphs**

- Area graphs show the actual value each series contributes to the total.
- Best show patterns created over time, e.g., how total enrollment changed over time, due to enrollment changes in urban and rural schools respectively; how total children of school-age, consisting of those in and those out of school, grew over time.
- Good for illustrating situations with only a few parts that have simple development patterns.

**Area Graph Example**

- **X-axis:** Year (1980-2010)
- **Y-axis:** Literacy and illiteracy rates by gender (1980-2015)
- **Legend:** Male Literate, Female Literate, Male Illiterate, Female Illiterate
- **Source:** Source (not specified)

**100% Stacked Bar Graph**

- Use when we are interested in relative frequencies.
- Emphasize the percentages within a stack, but remove the distinction in values between stacks.
- Use when the total extension completely covers the quantitative axis so that what the segments show represents 100% - e.g., the breakdown of educational expenditures, comparing government and non-government budget breakdown.

**100% Stacked Bar Graph Example**

- **X-axis:** Year (1978-2004)
- **Y-axis:** Percentage
- **Legend:** Primary, Secondary, Tertiary
- **Source:** MOE, Republic of Utopia: 2005

**Comparison Graphs**

- Comparison graphs have lines connecting the boundaries between series.
- This makes it easier to compare series values or proportions from one bar to the next, e.g., the % promoted and the % repeated respectively, compared across grade levels.
Comparison Graph Example

Pie Chart Example

Pie Chart

- Suitable for illustrating percentage distributions of qualitative variables - e.g. the breakdown of the annual education budget into categories of expenditure such as teacher salaries, school construction, etc;
- An alternative to bar charts;
- Best suited for overviews;
- Should not have too many sectors – 5 or 6 is the limit

Pie Chart Example

XY ‘Scatter-Plot’ Graphs

- XY ‘scatter-plot’ graphs plot values in one series against those in another, e.g. to show disparities.

XY Scatter Plot Graph Example

Thematic Maps

- Thematic maps plot values on geographical maps, showing variation in the values by geographical boundaries, e.g. the disparity between regions: enrolment rate by regions/provinces; gender disparity ratio (ratio of female enrolment rate to that of male) by regions/provinces.
Thematic Maps

Optimal Visual Arrangement

Conclusions

Conclusions

The objective of analysis determines what comparisons are important and the selection of the policy-relevant analytical variables.

From a design point of view, the optimal visual arrangement of comparisons also depends on the objective of the analysis.

It is important to select analytical variables and group the order of comparisons according to the objective of your analysis.

The main purpose of the MDA report is to communicate policy-relevant developments.

Indicators, variables and methods of analysis must be chosen based on national goals and targets.

Readability is critical: the report should be divided into two main parts, presenting the main findings and then the supporting technical reference materials.

The report should highlight both the forest and the trees (the big picture and the finer details).

The main purpose of graphs is to visually impart information that cannot be easily read from a data table.

Present net results, relegating the detail tables used for calculation to a separate technical reference section or document;

Highlights the magnitude of differences between comparative groups or categories of the analytical variables;

The optimal visual arrangement of comparisons also depends on the objective of the analysis;

Select analytical variables and group the order of comparisons according to the objective of your analysis.