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USAID/CAPACITY BUILDING ACTIVTIY (CBA)

TRAINING MANUAL

FOR

DATA ANALYSIS IN MINISTRY OF EDUCATION WITH FOCUS ON ACCESS, EQUITY & QUALITY INDICATORS

Manual

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Contents

INTRODUCTION:

The Capacity Development Activity (CBA) of USAID is entrusted to improve MoE systems and procedures that lead to better provisioning of educational services, and greater transparency and accountability of national and sub-national systems. Because improving EMIS is an important component in the CBA, it was determined in partnership with the MoE and USAID that the best first step before beginning implementation was to conduct a detailed assessment of EMIS. Therefore, CBA EMIS team conducted an assessment.

The collection of education data is intended to support informed decision making by education managers. This support is only possible if the education data is analyzed effectively. Furthermore, education managers must be able to utilize the information generated by EMIS.

It was observed that the analysis capability of EMIS and programs staff is weak, and needs improvement, and the EMIS data is underutilized due to lack of awareness as well as weak capacities of the education managers to use this data.

Therefore, it was decided in the beginning of the project to develop capacity building programs for MoE staff at national, provincial and district levels to enhance data analysis capabilities.

This training material has been developed focusing on analyzation of EMIS data, and specifically focused on Access, Equity and Quality indicators which are internationally recognized and developed by UNESCO Institute of Statistics.

In this training manual the goal, objectives and expected results in terms various capacity building activities are explicitly described and to be carried out to address the capacity gaps in data analysis. The delivery of these training material will lead to achievement of the project's goal of provision of educational services through an improved EMIS system by enhancing capacity levels of MoE staff.

This training program aims to improve analysis, of education data, to enhance support towards informed decision-making by education managers.

TRAINING PROGRAM- I:
[Goal – 1:(Ecce Indicators) & Goal – 2 (Universal Primary Education)]
How To Calculate Access & Participation Indicators?

TRAINING OBJECTIVES:

By the end of this training session, participants will be able to perform independently analysis of the collected Educational Data by using Access and Participation indicators. They should be able to validate their understanding by providing examples of each type of data.

WHAT WILL THE PARTICIPANTS LEARN?

- The participants will understand the definition, purpose and method of calculation of Early Childhood Care & Education.
- The participants will learn what types of data is needed for the computation of Access & Participation Indicators.
- The participants will be able that to differentiate between Access & Participation Indicators
- The participants will be able to understand and correctly calculate and use suitably the Access & Participation Indicators using EMIS data.

ACTIVITIES:

Activity – 1: (The Participants are introduced to the definition, purpose and method of calculation for EFA Indicators and goal – 1 which comprises Early Childhood Care & Education): In the beginning, the participants are introduced to the definition, purpose of Early childhood Care & Education which comprises Goal-1 of EFA Indicator. types of data needed for the calculations of these indicators through PowerPoint presentation by the trainer. The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the

topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

Activity – 2: (The Participants are introduced to different ECCE Indicators): The participants are introduced to the ECCE indicators and their method of calculations through PowerPoint presentation by the trainer.

1. Gross Enrolment Ratio (GER) in Early Childhood Care and Education (ECCE) Programs
2. Percentage of New Entrants to Primary Grade 1 who have Attended Some Form of Organized ECCE Program
3. Private Centre Enrolment as percentage of Total Enrolment in ECCE Programs
4. Percentage of Trained Teachers in ECCE Programs

The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

Activity – 3: (Group Work: The Participants undertake the group work on identifying the needed information for the calculations of ECCE indicators, the activity is facilitated by the trainer): The participants will work on the various sources of data required for the calculation of these indicators and share their experiences.

Activity – 4: (Quiz: The Participants take a quiz related to the purpose and use of ECCE indicators): The participants provided with list of ECCE indicators, and they are required to express their understanding of utilization of each indicator.

Activity – 5: (The Participants are introduced to the definition, purpose and method of calculation for Achieving Universal Primary Education Indicators and goal – 2 which comprises some other Access & Participation indicators): In the beginning, the participants are introduced to the definition, purpose of Achieving Universal Primary Education which comprises Goal-2 of EFA and MDG's Indicators. types of data needed for the calculations of these indicators through PowerPoint presentation by the trainer.

The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

Activity – 6: (The Participants are introduced to some other Access & Participation Indicators): The participants are introduced to some other Access and Participation indicators and their method of calculations through PowerPoint presentation by the trainer.

1. Gross Intake Rate (GIR) in Primary Education
2. Net Intake Rate (NIR) in Primary Education
3. Gross Enrolment Ratio (GER) in:
    - primary education
    - secondary education
4. Net Enrolment Ratio (NER) in:
    - primary education
    - secondary education
5. Repetition Rates (RR) by Grade in Primary Education

The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

Activity – 7: (Group Work: The Participants undertake the group work on identifying the needed information for the calculations of above indicators, the activity is facilitated by the trainer): The participants will work on the various sources of data required for the calculation of these indicators and share their experiences.

Activity – 8: (Quiz: The Participants take a quiz related to the purpose and use of Access & Participation indicators): The participants provided with list of above indicators, and they are required to express their understanding of utilization of each indicator.

Activity – 9: (The Participants are introduced to the definition, purpose and method of calculation for EFA Indicators and goal – 2 which comprises some other Access & Participation Indicators): In the beginning, the participants are introduced to the definition, purpose of Achieving Universal Primary Education which comprises Goal-2 of EFA and MDG's Indicators. types of data needed for the calculations of these indicators through PowerPoint presentation by the trainer. The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

Activity – 10:(The Participants are introduced to some other Access & Participation Indicators): The participants are introduced to some other Access and Participation indicators and their method of calculations through PowerPoint presentation by the trainer.

1. Survival Rate to Grade 6
2. Transition Rate to Secondary Education
3. Percentage of Trained Teachers at Primary Education
4. Pupil-Teacher Ratio at Primary Education
5. Public Expenditure on Primary Education as Per cent of Total Public Expenditure on Education

The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

Activity – 11: (Group Work: The Participants undertake the group work on identifying the needed information for the calculations of above indicators, the activity is facilitated by the trainer): The participants will work on the various sources of data required for the calculation of these indicators and share their experiences.

Activity – 12: (Quiz and Discussion: The Participants take a quiz related to the purpose and use of Access & Participation indicators): The participants provided with list of above indicators, and they are required to express their understanding of utilization of each indicator.

TOTAL SESSION TIME: **24 Hours (Three days)**

Training Agenda

Duration	Activity	What is needed?
TRAINING – II: Calculation of Access & Participation Indicators		
Day first		
1 Hour 15 Minutes	Participatory Lecture and Power point presentation by the trainer on definition, purpose and concepts of ECCE indicators.	– Projector – Power Point Presentation
Tea Break for 15 Minutes		
1 Hour 15 Minutes	The participants are introduced to the ECCE indicators and their method of calculations through PowerPoint presentation by the trainer.	– Projector – Flip Chart – Notebook and Pen
Lunch & Prayer Break (12:00 – 01:00)		
1 Hour 30 Minutes	The participants will work on the various sources of data required for the calculation of these indicators and share their experiences. The activity is facilitated by the trainer.	– Projector – Power Point Presentation
1 Hour 30 Minutes	Quiz: participants provided with list of ECCE indicators, and they are required to express their understanding of utilization of each indicator.	– Projector – Flip Chart – Notebook and Pen
Day Second		
1 Hour 15 Minutes	Participatory Lecture and Power point presentation by the trainer on definition, purpose and method of calculation for Achieving Universal Primary Education Indicators and goal – 2 which comprises some other Access & Participation indicators	– Projector – Power Point Presentation
Tea Break for 15 Minutes		
1 Hour 15 Minutes	The participants are introduced to some other Access and Participation indicators and their method of	– Projector – Flip Chart – Notebook and Pen

	calculations through PowerPoint presentation by the trainer. 1. Gross Intake Rate (GIR) in Primary Education 2. Net Intake Rate (NIR) in Primary Education 3. Gross Enrolment Ratio (GER) in: ○ primary education ○ secondary education 4. Net Enrolment Ratio (NER) in: ○ primary education ○ secondary education 5. Repetition Rates (RR) by Grade in Primary Education The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.	
Lunch & Prayer Break (12:00 – 01:00)		
1 Hour 30 Minutes	Group Work: The Participants undertake the group work on identifying the needed information for the calculations of above indicators, the activity is facilitated by the trainer	– Projector – Power Point Presentation
1 Hour 30 Minutes	Quiz and Discussions**:** The Participants take a quiz related to the purpose and use of Access & Participation indicators	– Projector – Flip Chart – Notebook and Pen

Day Third		
1 Hour 15 Minutes	Participatory Lecture and Power Point Presentation: In the beginning, the participants are introduced to the definition, purpose of Achieving Universal Primary Education which comprises Goal-2 of EFA and MDG's Indicators. types of data needed for the calculations of these indicators through PowerPoint presentation by the trainer. The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.	
Tea Break for 15 Minutes		
1 Hour 15 Minutes	The participants are introduced to some other Access and Participation indicators and their method of calculations through PowerPoint presentation by the trainer. 1. Survival Rate to Grade 6 2. Transition Rate to Secondary Education 3. Percentage of Trained Teachers at Primary Education 4. Pupil-Teacher Ratio at Primary Education 5. Public Expenditure on Primary Education as Per cent of Total Public Expenditure on Education The participants take part in the discussion related to each topic and	

	are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.	
Lunch & Prayer Break (12:00 – 01:00)		
1 Hour 30 Minutes	Group Work: The Participants undertake the group work on identifying the needed information for the calculations of above indicators, the activity is facilitated by the trainer	
1 Hour 30 Minutes	Quiz and Discussion: The Participants take a quiz related to the purpose and use of Access & Participation indicators	

Definition, purpose & method of calculation for EFA Indicators

Goal 1: Early Childhood Care and Education

Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children

Early Childhood Care and Education (ECCE) is fundamental to lifelong learning and provides the foundation on which an education is based. Before school begins, practices in the home have tremendous impact on future school performance. Inputs such as proper nutrition, full immunization, Vitamin A supplementation and access to iodized salt have a direct impact on later school performance, as does early learning and stimulation experiences prior to entering grade 1. While traditional indicators for ECCE focused only on formal pre-schools, in the EFA MDG, the Goal is expanded to reflect the inter-sectoral nature of early childhood and the importance of non-educational factors in the development and educational success of children.

Core EFA MDG Indicators

1	Core EFA MDG Indicators	Suggested disaggregation (If data are available)	Data Source

1.1	**Gross Enrolment Ratio (GER) in Early Childhood Care and Education (ECCE) Programs**	• Sex
		• Geographical region
		• Urban/Rural
		• Pre-school/community based
		• Other social and economic disaggregation such as
		  ○ Ethnicity, caste
		  ○ Language
		  ○ Disabilities
		  ○ Mother's education
		  ○ Income quintile
			• Annual school census
			• Household surveys

1.2	**Percentage of New Entrants to Primary Grade 1 who have Attended Some Form of Organized ECCE Program**	• Sex
		• Geographical region
		• Urban/Rural
		• Public, private
		• Pre-school/community based
		• Other social and economic disaggregation such as
		  ○ Ethnicity, caste
		  ○ Language
		  ○ Disabilities
		  ○ Mother's education
		  ○ Income quintile
			• Annual school census
			• Household surveys

1.3	**Private Centre Enrolment as percentage of Total Enrolment in ECCE Programs**	• Sex • Geographical region • Urban/Rural	• Annual school census • Household surveys
1.4	**Percentage of Trained Teachers in ECCE Programs**	• Sex • Geographical region • Urban/Rural • Public, private	• Annual school census • Household surveys

1.1 Gross Enrolment Ratio (GER) in Early Childhood Care and Education Programmes

Definition and Purpose

Total number of children enrolled in early childhood care and education programs, regardless of age, expressed as a percentage of the population in the relevant official age-group, otherwise the age-group 3 to 5. This indicator measures the general level of participation of young children in ECCE programs. It also indicates a country's capacity to prepare young children for primary education. It should be noted that this indicator refers to both formal public, private, and faith-based pre-schools and non-formal community-based centers.

Method of Calculation and Data Required

Divide the number of children enrolled in ECCE programs, regardless of age, by the population in the relevant official age-group (otherwise the age-group 3 to 5) in a given school-year and multiply by 100.

$$GER_{EC}^{t} = \frac{E_{EC}^{t}}{P_{EC}^{t}} \times 100 \quad \text{or} \quad GER_{EC}^{t} = \frac{E_{EC}^{t}}{P_{3-5}^{t}} \times 100$$

Where,

GER_{EC}^{t} = Gross enrolment ratio in early childhood development programmes in school-year t

E_{EC}^{t} = Number of children enrolled in early childhood development programmes in school-year t

P_{EC}^{t} = Population in relevant official age-group concerned with ECCE in school-year t

Possible Data Sources

The data on enrolment should cover both public and private institutions and programs. Data for public programs should be available from the school survey. Household surveys or other private records may provide the necessary data for programs run by the community or NGOs and private schools. In some cases, countries may have compiled the data from both public and private programs. Population data can be sourced from censuses and NSO projections.

Disaggregation

Where data is available, GER in ECCE can be disaggregated by sex, region, urban/rural, social and ethnic groups, linguistic groups, disabilities, vulnerable groups.

Interpretation

A high gross enrolment rate in ECCE programs indicates adequate capacity for this type of program within the country. A gross enrolment rate approaching or surpassing 100 per cent indicates that a country is, in principle, able to accommodate all children in the official age-group that should take part in ECCE programs. Countries may also differ widely in their approaches to early childhood education, with some approaches focusing on experiential education while others emphasize skills development, academic development, the visual arts, etc.

For the Mid-Decade Assessment, it is important to analyze the disparities in participation in ECCE. GER in ECCE can provide information regarding access to ECCE and existing disparities across sub-groups and geographical areas.

Limitations and Constraints

The data on enrolment should cover both public and private institutions and programs. Enrolment data for ECCE programs can be affected by differences in reporting practices, namely by the extent to which child-care programs with little or no pedagogical component are included in the statistics. The distinction between ECCE and organized, custodial childcare can be difficult to define in an internationally consistent way, especially about very young children, for whom the natural pace of development limits the pedagogical possibilities. Since gross enrolment does not take the age factor into account, children below 3 years and above 5 years (or whatever the official age-group may be) will also be included. Therefore, gross enrolment can exceed 100 per cent. Only countries that require official registration of any ECCE provision are likely to have official data for this indicator. Countries that have data for public or state-supervised pre-school educational programs only will need to supplement these data with information on enrolment in other types of ECCE programs, possibly through case studies and/or sample surveys.

1.2 Percentage of New Entrants (NE) to Primary Grade 1 who have Attended Some Form of Organized ECCE ProgrammeDefinition and Purpose

Number of new entrants to primary Grade 1 who have attended some form of organized ECCE program equivalent to at least 200 hours, expressed as a percentage of total number of new entrants to primary Grade 1. This indicator helps to assess the proportion of new entrants to Grade 1 who presumably have received some preparation for primary schooling through ECCE programs. It should be noted that this indicator refers to both formal pre-schools and non-formal community-based centers.

Method of Calculation and Data Required

Divide the number of new entrants to Grade 1 of primary education who have attended some form of organized early childhood development program by the total number of new entrants to primary Grade 1 in a given school-year, and multiply by 100.

$$\%NE^{t}_{1,EC} = \frac{NE^{t}_{1,EC}}{NE^{t}_{1}} \times 100$$

Where,

$\%NE^{t}_{1,EC}$ = Percentage of new entrants to grade 1 of primary education in school-year t who have attended some form of organized early childhood care and education programme;

$NE^{t}_{1,EC}$ = Number of new entrants to grade 1 of primary education in school-year t who have attended some form of organized early childhood care and education programme;

NE^{t}_{1} = Total number of new entrants to primary grade 1 in school-year t.

Possible Data Source

Useful data may exist in school registration records. School census instruments may also be geared to collecting this information. Otherwise, data can be gathered through a sample survey of schools or through household surveys (UNESCO 1998)

Disaggregation

Where data is available, the indicator can be disaggregated by sex, region, urban/rural, social and ethnic groups, linguistic groups, disabilities, vulnerable groups, and public/private institutions.

Interpretation

A high percentage of new entrants to Grade 1 of primary education who have attended some form of organized ECCE program indicate that a large proportion of these children have participated in organized learning activities prior to entering primary school.

Progress in schooling is often associated with cognitive abilities acquired at young ages. It is commonly recognized that prior participation in ECCE programs can play an important role in a child's future education since it shapes attitudes toward learning and developing basic social skills. But the effect of ECCE activities on children's cognitive development may vary according to the program attended. However, this indicator may give an exaggerated picture of access to ECCE, since those children who have access to ECCE programs are also more likely to have access to primary schools.

The indicator may also be useful in highlighting disparities in access to ECCE across different regions and among different populations.

Limitations and Constraints

The percentage of new entrants to primary Grade 1 who have attended some form of organized early childhood care and education program cannot exceed 100 per cent. Obtaining data for this indicator will be a problem in many countries.

1.3 Private Centre Enrolment as Percentage of Total Enrolment in ECCE Programmes

Definition and Purpose

The total number of enrolments in private institutions and centers expressed as a percentage of total number of enrolment in ECCE programs. This indicator helps to assess the proportion of private sector involvement in ECCE programs.

Method of Calculation and Data Required

Divide the total number enrolment in private institutions and centers by the total number of enrolments in ECCE programs in a given school-year and multiply by 100.

Possible Data Source

Data can be collected and compiled through school registration system and other various institutional data collections. Other possible sources would be through household surveys asking relevant questions.

Disaggregation

Where data is available, the indicator can be disaggregated by sex, region, urban/rural, social and ethnic groups, linguistic groups, disabilities, and other vulnerable groups.

Interpretation

A high percentage of enrolment in private institutions and centers indicates a significant role and involvement of the private sector. A low GER and high enrolment in the private sector indicates there is a need for the government to allocate more resources and give more attention to expand its ECCE programmes.

Limitations and Constraints

Like most data on ECCE, it is difficult to collect data since many institutions, which fall under different ministries, are involved. In some countries, the private sector significantly has a big share in ECCE and it is difficult to get data from these institutions.

1.4 Percentage of Trained Teachers in ECCE Programmes

Definition and Purpose

The number of teachers who are trained to teach pre-schoolers, expressed as a percentage of the total number of teachers at ECCE programs. Having trained teachers

on ECCE programs is crucial, particularly for the organized forms of ECCE. It is directly relevant to the quality of programs, which is an important foundation for the young children preparing them for formal primary school education.

Method of Calculation and Data Required

Divide the number trained teachers by the total number of teachers in ECCE programs in a given school-year and multiply by 100.

Possible Data Sources

Data can usually be gathered from the annual school census and other institutional data collection systems. Additional data can also be collected through special school surveys.

Disaggregation

Data can be disaggregated by socio-economic status, geographic region, or urban or rural. It is also useful to look at institutional disaggregation.

Interpretation

A high percentage indicates the availability of better quality of ECCE services and programs in the country.

Limitations and Constraints

Like most data on ECCE, it is difficult to collect data since many institutions, which fall under different ministries, are involved. In some countries, the private sector significantly has a big share in ECCE and it is difficult to get data from these institutions.

Goal 2: Achieving Universal Primary/Basic Education

Ensuring that by 2015 (for Afghanistan 2020) all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to a complete free and compulsory education of good quality

Universal primary education aims not only to expand access to primary education for all children, but also the improvement of the education system's internal efficiency so that all pupils actually complete the primary cycle. It entails ensuring that adequate resources and infrastructure are available and used effectively. Education systems should be accessible to ALL children and should provide quality education.

The goal also brings particular attention to girls and children in difficult circumstances and those belonging to ethnic minorities, who constitute a significant proportion of the unreached groups. To undertake a comprehensive assessment to cover these groups, data for the un-, under-reached and/or marginalized groups should be collected along with other information from all available sources beyond the traditional school censuses. Data should be collected from all forms of organized provision of primary education, whether public or privately funded or managed.

To have a comprehensive assessment of progress towards this target, data and other information are needed on all forms of organized provision of primary education, whether publicly or privately funded or managed. When a country considers that "basic education" includes the first (lower) cycle of secondary education as well, data on these should also be included in the assessment.

Core EFA MDG Indicators

2	Core EFA MDG Indicators	Disaggregation	Data Sources

2.1	**Gross Intake Rate (GIR) in Primary Education**	• Sex
		• Geographical region
		• Urban/Rural
		• Other social and economic disaggregation such as
		  ○ Ethnicity, caste
		  ○ Language
		  ○ Disabilities
			• Annual school census
			• Household surveys

2.2	**Net Intake Rate (NIR) in Primary Education**	• Sex
		• Geographical region
		• Urban/Rural
		• Other social and economic disaggregation such as
		  ○ Ethnicity, caste
		  ○ Language
		  ○ Disabilities
			• Annual school census
			• Household surveys

2.3	**Gross Enrolment Ratio (GER) in:**
	• **primary education**
	• **secondary education**
		• Sex
		• Geographical region
		• Urban/Rural
		• Other social and economic disaggregation such as
		  ○ Ethnicity, caste
		  ○ Language
		  ○ Disabilities
			• Annual school census
			• Household surveys

2.4	**Net Enrolment Ratio (NER) in:**
	• **primary education**
	• **secondary education**
		• Sex
		• Geographical region
		• Urban/Rural
		• Other social and economic disaggregation such as
		  ○ Ethnicity, caste
		  ○ Language
		  ○ Disabilities
			• Annual school census
			• Household surveys

2	Core EFA MDG Indicators	Disaggregation	Data Sources

2.5	**Repetition Rates (RR) by Grade in Primary Education**	• Sex
		• Geographical region
		• Urban/Rural
		• Public/private
		• Other social and economic disaggregation such as
		  ○ Ethnicity, caste
		  ○ Language
		  ○ Disabilities
			• Annual school census

2.6	**Survival Rate to Grade 6**	• Sex
		• Geographical region
		• Urban/Rural
		• Public/private
		• Other social and economic disaggregation such as
		  ○ Ethnicity, caste
		  ○ Language
		  ○ Disabilities
			• Annual school census

2.7	**Transition Rate to Secondary Education**	• Sex
		• Geographical region
		• Urban/Rural
		• Public/private
		• Other social and economic disaggregation such as
		  ○ Ethnicity, caste
		  ○ Language
		  ○ Disabilities
			• Annual school census
			• Household surveys

2.8	**Percentage of Trained Teachers at Primary Education**	• Sex • Geographical region • Urban/Rural • Public, private • Number of teachers with training for special education	• Annual school census • Household surveys

2	Core EFA MDG Indicators	Disaggregation	Data Sources
2.9	**Pupil-Teacher Ratio at Primary Education**	• Geographical region • Urban/Rural • Public, private	• Annual school census • Household surveys
2.10	**Public Expenditure on Primary Education as Per cent of Total Public Expenditure on Education**	• National level indicator	• Government Budget reports

2.1 Gross Intake Rate (GIR) in Primary Education

Definition and Purpose

Total number of new entrants in the first grade of primary education, regardless of age, expressed as a percentage of the population at the official primary school-entrance age. The Gross Intake Rate (GIR) reflects the general level of access to primary education. This indicator provides only a rough measure of access to the first grade since it also takes into account the number of over-aged and under-aged new entrants to Grade 1. It also indicates the capacity of the education system to provide access to Grade 1 education for the official school-entrance age population. This indicator is used as a substitute for Net Intake Rate (NIR) in the absence of data on new entrants by single years of age.

Method of Calculation and Data Required

Divide the number of new entrants in Grade 1, irrespective of age, by the population of official school-entrance age, and multiply the result by 100.

$$GIR_{Pri,\,t} = \frac{\text{Number of new entrants to Grade 1 (all ages) in school-year t}}{\text{Population of the official primary school-entrance age in school-year t}} \times 100$$

The above formula assumes that data on new entrants is available. If data on new entrants is not available, the new entrants to Grade 1 can be estimated by subtracting the number of Grade 1 repeaters from the total enrolment in Grade 1. This is shown below:

$$GIR_{Pri,\,t} = \frac{\text{(Number of pupils in Grade 1 in school-year t) – (Number of repeaters in Grade 1 in school-year t)}}{\text{Population of the official primary school-entrance age in school-year t}} \times 100$$

Some countries allow for automatic promotion to Grade 1, which means there are no repeaters at the pre-primary level. In this case the number of new entrants is the same as the total enrolment. Hence, the first formula (above) to estimate the GIR can be used. Note that for this case, the number of new entrants to Grade 1 is equal to the total enrolment in Grade 1.

Possible Data Sources

Data on new entrants by age can be collated from school registers, school surveys or censuses. Data for the primary school-entrance age population can be derived from population censuses or estimates.

Disaggregation

The Gross Intake Rate can be disaggregated by sex, region, urban/rural, social and ethnic groups, linguistic groups, disabilities, and other vulnerable groups.

Interpretation

A high Gross Intake Rate indicates in general a high degree of access to primary education. As this calculation includes all new entrants to first grade, including over-aged and under-aged children entering primary school for the first time, the GIR can be more than 100 per cent.

This indicator is also useful in matching the school capacity and the demand for entry into the first grade. The difference between the GIR and the NIR shows the deviation from the official-age intake. Continued or increasing deviation may imply that the policy

of official school-entrance age may need to be changed to accommodate the real demographic structure of demand for education.

Limitations and Constraints

The number of new entrants should refer to both public and private schools. Data on population (or population estimates) used in deriving this indicator should refer strictly to the official school-entrance age. Care should be taken not to include repeaters in Grade 1 in the calculation, since this will lead to an inflated GIR.

2.2 Net Intake Rate (NIR) in Primary Education

Definition and Purpose

The net intake rate is the ratio of new entrants in the first grade of primary education who are of the official primary school-entrance age, to the total population of the same age expressed as a percentage. It gives a more precise measurement of access to primary education of the eligible, primary school-entrance age population than does the apparent intake ratio. It is a key parameter used for projecting school enrolment as it measures the extent of access of the school-entrance age population.

Method of Calculation and Data Required

Divide the number of new entrants in Grade 1 who are in the official school-entrance age, by the population of official school-entrance age, and multiply the result by 100.

$$GIR_{Pri,\,t} = \frac{\text{(Number of pupils in Grade 1 in school-year t) – (Number of repeaters in Grade 1 in school-year t)}}{\text{Population of the official primary school-entrance age in school-year t}} \times 100$$

Possible Data Sources

Data on new entrants by age can be collated from school registers, school surveys or censuses while data or estimates for the primary school-entrance age can be sourced from population censuses.

Disaggregation

The Net Intake Rate is to be disaggregated by sex, region, urban/rural, social and ethnic groups, linguistic groups, disabilities, vulnerable groups.

Interpretation

A high NIR indicates a high degree of access to primary education for the official primary school-entrance age children and a high proportion of pupils of the same age in the first primary grade. It is a measure of how close countries are to universalizing primary education.

Note also the difference between the apparent intake rate and the net intake rate. The numerator for the apparent intake rate is the total number of new entrants regardless of age. The numerator for the net intake rate is the total number of new entrants for a specific primary school-entrance age. The denominator for both rates is the total population of the official primary school-entrance age. The net intake rate is always less than or equal to the apparent intake rate.

Limitations and Constraints

Data on both new entrants and population used in deriving this indicator should refer strictly to the official school-entrance age. In principle the value of this indicator should not exceed 100 per cent. Care should be taken not to include repeaters in Grade 1 in the calculation, this leads to double counting of under-aged pupils who repeat the first grade when they reach the official-entrance age.

2.3 Gross Enrolment Ratio (GER)

Definition and Purpose

The GER is the total enrolment for a particular education level (primary or secondary), regardless of age, expressed as a percentage of the eligible official school-age population of that particular education level in a given school-year. It is widely used to show the general level of participation in, and the capacity of the primary education

system. It is used in place of the net enrolment ratio when data on enrolment by single years of age are not available. It can also be used together with the NER to measure the extent of over-aged and under-aged enrolment.

Gross Enrolment Ratio by Level

The GER can be generated by level (primary, secondary) as the proportion of total pupils in a particular level, expressed as a percentage of the population of the corresponding school-age.

Method of Calculation and Data Required

Primary Level

The gross enrolment ratio for primary education is defined as the total number of pupils in the primary level, divided by the total population of official primary school ages, expressed as a percentage. Different countries may have different grades or age groups in the primary level.

$$GER_{Pri,\,t} = \frac{\text{Total enrolment at the primary education level in school-year t}}{\text{Population of the official primary school age group in school-year t}} \times 100$$

Secondary Level

The gross enrolment ratio for secondary education is defined as the total number of enrolment in the secondary level, divided by the total population of official secondary school ages, expressed as a percentage.

$$GER_{Pri,\,t} = \frac{\text{Total enrolment at the secondary education level in school-year t}}{\text{Population of the official secondary school age group in school-year t}} \times 100$$

Possible Data Sources

Data on enrolment can be derived from school registers, school surveys or censuses. Population censuses or estimates are a good source for data on the official school-age population for both primary and secondary levels.

Disaggregation

The GER can be disaggregated by sex, region, urban/rural, social and ethnic groups, linguistic groups, disabilities, and other vulnerable groups.

Interpretation

The GER is the most commonly used indicator to measure coverage. It shows the overall coverage of an education system in relation to the population eligible for participation in the system. It is useful for those who are interested in the overall participation of the school-age population in a particular education level. It can be used for comparing different districts, provinces, regions, urban and rural provinces, boys and girls, etc.

The gross enrolment ratio can be over 100 per cent, where the number of over-aged children in schools is high relative to children of the official age for the level. A high GER indicates a high degree of participation, whether the students belong to the official age-group or not. A GER value approaching or exceeding 100 per cent indicates a country is, in principle, able to accommodate all of its primary school-age population. It does not, however, indicate the proportion of that population actually enrolled. A GER of 100 per cent is therefore a necessary but not sufficient condition for universal primary education. When a country's GER for primary education exceeds 90 per cent, it indicates that the aggregate number of places for students is approaching the number required for full enrolment of the official age-group population. However, in order to achieve universal primary education, the number of under-aged and over-aged pupils would need to decline to free places for students in the official primary school age-group.

Limitations and Constraints

The GER at the primary level of education should be based on the total enrolment in all types of primary schools and equivalent education institutions, including public, private and all other institutions that provide organized educational programs at the primary level. GER can sometimes exceed 100 per cent due to the inclusion of over-aged

and under-aged pupils and repeaters. In this case, a rigorous interpretation of GER needs additional information on the extent of repetition, early and late entrants, etc.

2.4 Net Enrolment Ratio (NER)

Definition and Purpose

The enrolment in a particular education level of the official school age-group expressed as a percentage of the corresponding population. The NER gives a more precise measurement of the extent of participation in primary education of children belonging to the official primary school age.

Net Enrolment Ratio by Level

This indicator can also be generated by level, e.g. primary or secondary.

Method of Calculation and Data Required

Primary Level

The net enrolment ratio for primary education is defined as the number of students in the primary level who are at the official primary school age-group, divided by the total population of official primary school ages, expressed as a percentage. Different countries may have different grades or age groups in primary level.

$$NER_{Pri,t} = \frac{\text{Enrolment of official primary school age group in the primary education level in school-year t}}{\text{Population of the official primary school age group in school-year t}} \times 100$$

The net enrolment ratio for the secondary level is calculated by dividing the total number of pupils who are at the official secondary school age-group by the total population of official secondary school ages.

$$NER_{Sec,t} = \frac{\text{Enrolment of official secondary school age group in the secondary education level in school-year t}}{\text{Population of the official secondary school age group in school-year t}} \times 100$$

Possible Data Sources

Data on enrolment can be derived from school registers, school surveys or censuses. Population censuses or estimates are a good source for data on the official school-age population for both primary and secondary levels.

Disaggregation

The NER can be disaggregated by sex, region, urban/rural, social and ethnic groups, linguistic groups, disabilities, caste and other vulnerable groups.

Interpretation

A high NER in primary education denotes a high degree of participation in primary education of the official primary school age-group. The NER's maximum value is 100 per cent. An NER in primary education that increases over time reflects improving participation at the primary level of education. The difference between the GER and the NER measures the incidence of under-age and over-age enrolment. If the NER in primary education is below 100 per cent, the percentage difference between the NER and 100 per cent provides a measure of the proportion of primary school-age children not enrolled at the primary level, i.e. if NER for primary level is 80 per cent, then 20 per cent of the primary school age population are not in school. However, since some primary school-age children could be enrolled at other levels of education, this percentage difference should in no way be considered as indicating the exact percentage of children not enrolled. A similar analysis can be applied to the NER for the secondary level.

A more precise complementary indicator is the age-specific enrolment ratio (ASER), which shows the level of participation in education of the population at each particular age. This ratio is a more accurate indication of the participation of school-age children in primary education than the gross enrolment ratio. In many countries, data on enrolment by age is not available and NER is not as commonly used as the gross enrolment ratio.

Limitations and Constraints

NER at the primary level should be based on the total enrolment in all types of primary schools and equivalent educational institutions, including public, private and all other institutions that provide organized educational programs at the primary level. Same as applies for the NER for the secondary level.

Although theoretically the NER cannot exceed 100 per cent, in practice, it can go up to over 100 per cent due to inconsistencies in the enrolment and/or population data. When the NER exceeds 100 per cent during calculation, the following factors may cause the irregularity:

- Underestimation of population data
- When the reference date for entry to primary education does not coincide with the birth dates of all of the cohort eligible to enroll at this level of education;
- When a large proportion of children starts primary school earlier than the prescribed age and consequently finishes earlier as well; and
- When there is an increase in the entrance age to primary education while its duration remains unchanged.

2.5 Repetition Rates (RR) by Grade in Primary Education

Definition and Purpose

The repetition rate is the proportion of pupils who repeat a grade. It measures the rate at which pupils repeat grades. A high repetition rate implies high wastage ratio. It blocks access to schooling for other children since the school space is occupied by repeaters.

Method of Calculation

The repetition rate of grade g, year t is obtained by dividing repeaters of grade g, year t+1, by enrolment in grade g, year t. The general formula will be as follows:

$$RR_{g,t} = \frac{\text{Number of pupils repeating grade g, in school-year t+1}}{\text{Number of pupils enrolled in grade g, in school-year t}} \times 100$$

As a particular example, if you would like to find out the repetition rate of grade 3 in school year of 2004, the formula would be:

$$RR_{3,2004} = \frac{\text{Number of pupils repeating grade 3, in school-year 2005}}{\text{Number of pupils enrolled in grade 3, in school-year 2004}} \times 100$$

Possible Data Sources

The data on repeaters and enrolment could be derived from annual school census or survey. Household surveys or other administrative records may provide the necessary data for programs run by the community or NGOs and private schools. In some cases, countries may have compiled the data from both public and private programs.

Disaggregation

Repetition Rates by grade in primary education can be disaggregated by grade, sex, region, urban/rural, social and ethnic groups, linguistic groups, disabilities, vulnerable groups, and public/private institutions.

Interpretation

Repetition rates should ideally approach zero per cent. High Repetition Rates indicate problems in the internal efficiency of the education system and possibly a poor level of instruction. When compared across grades, the patterns can indicate specific grades with relatively higher repetition rates. In some cases, low repetition rates merely reflect policies or practices of automatic promotion. The maximum repetition rate and the number of grade repetitions allowed may in some cases be determined by the education authorities in order to cope with limited capacity at certain grade levels and to increase the flow of pupils through the education cycle. Consequently, care should be taken in interpreting this indicator, especially when making comparisons between education systems.

Limitations and Constraints

Like other student-flow rates, the repetition rate is derived by analyzing data on enrolment and repeaters by grade for two consecutive years. It should be ensured that

such data are consistent in terms of coverage over time and across grades. Special attention should be paid to avoid some common errors that may bias these flow-rates, such as over-reporting of enrolments and/or repeaters (particularly in Grade 1), incorrect distinction between new entrants and repeaters, and transfers of pupils between grades and schools.

2.6 Survival Rate to Grade 6

Definition and Purpose

Survival Rate to Grade 6 is the proportion of a cohort of pupils who reached Grade 6 expressed as a percentage of pupils enrolled in the first grade of a given cycle in a given school year. This indicator is used to show the extent to which the school system can retain pupils, with or without repetition, and indicates the dropout rate. It is also used to measure the impact of dropout on internal efficiency.

Method of Calculation

Divide the total number of pupils belonging to a pupil cohort who reached Grade 6 of primary education by the number of pupils in the original pupil cohort, i.e. those pupils who enrolled together in the first grade of primary education and multiply by 100.

Usually this indicator is derived using reconstructed student cohort flow model. It requires the following data.

- Number of students enrolled by grade for two consecutive years
- Number of repeaters by grade in the second school year
- Number of graduates (successful completers) in the first school year
- Number of net transfer students (optional)

A detailed explanation of the reconstructed student model can be found in the Annex. UNESCO has developed an Excel Macro program for the student cohort flow model to produce survival rate along with other education indicators related the internal efficiency. **To request a copy of this program, e-mail** aims@unescobkk.org**.**

Possible Data Sources

Data can be derived from school registers, school surveys or censuses.

Disaggregation

Survival Rates can be disaggregated by sex, by geographical location (region, urban/rural) and by type of institution (private/public). It can also be disaggregated between survival with and without repetition.

Interpretation

A Survival Rate approaching 100 per cent indicates a high level of retention and low dropout incidence. Survival Rate may vary from grade to grade, giving indications of grades with relatively more or less dropouts. The distinction between survival rate with and without repetition is necessary to compare the extent of wastage due to dropout and repetition.

The Survival Rate to Grade 6 of primary education is of particular interest since completion of at least four years of schooling is commonly considered a pre-requisite for a sustainable level of literacy.

Limitations and Constraints

Since the calculation of this indicator is based on pupil-flow rates, the reliability of the survival rate to Grade 6 depends on the consistency of the data on enrolment and repeaters in terms of coverage over time and across grades. Since this indicator is usually estimated using cohort analysis models based on a number of assumptions, care should be taken in using the results for comparison.

2.7 Transition Rate (TR) to Secondary Education

Definition and Purpose

Transition Rate is the proportion of students that progress from the final grade of one level to the first grade of the next level, expressed as a percentage of those enrolled in the final grade of the preceding school year. It indicates the degree of access to the

next higher level, measuring the upward mobility in the educational hierarchy. Viewed from the lower cycle or level of education, it is considered as an output indicator. Viewed from the higher educational cycle or level, it is considered an indicator of access.

Method of Calculation

Divide the number of new entrants in the first grade of the specified higher cycle or level of education by the number of students enrolled in the final grade of the preceding cycle

$$TR_{Pri\ to\ Sec,\ t} = \frac{\text{New entrants to the first grade of the next higher level at school year t}}{\text{Number of pupils in the last grade of the previous level at school year t-1}} \times 100$$

When data on new entrants to the next higher grade is not available, subtract the number of repeaters from the total enrolment of the first grade of the next higher level to get the number of new entrants into the first grade of the next higher level. Divide the result by the total number of pupils in the last grade of the first level in the previous year.

$$TR_{Pri\ to\ Sec,\ t} = \frac{E - R}{\text{Number of pupils in the last grade of the previous level at school year t-1}} \times 100$$

1. E = Enrolment of the first grade of the next higher level at year t
2. R = Repeaters of the first grade of the next higher level at year t

Possible Data Sources

Data can be derived from school registers, school surveys or censuses.

Disaggregation

Transition Rate can be disaggregated by sex, level of education and geographical location (region, rural/urban).

Interpretation

High Transition Rates indicate high access or transition from one level of education to the next. It also reflects the intake capacity of the next level of education. Inversely, low

transition rates indicate problems in bridging between two cycles or levels of education, due to either deficiencies in the examination system or inadequate admission capacity in the higher cycle or level of education, or both.

Limitations and Constraints

This indicator should be based on reliable data of new entrants (or on enrolment and repeaters), especially in the first grade of the higher cycle or level of education. It can be distorted by incorrect distinction between new entrants and repeaters, especially in the first grade of the specified higher level of education. Students who interrupted their studies for one or more years after having completed the lower level of education, transferees and migrant students can also affect the quality of this indicator.

2.8 Percentage of Trained Teachers at Primary Education

See details on the EFA Goal 6 (Quality) section

2.9 Pupil-Teacher Ratio at Primary Education

See details on EFA Goal 6 (Quality) section

2.10 Public Expenditure on Primary Education as a Per cent of Total Public Expenditure on Education

Definition and Purpose

Public expenditure on primary education expressed as a percentage total public expenditure on education. It indicates government emphasis given to investments in primary education.

Method of Calculation and Data Required

Divide public current expenditure on primary education in a given year by total public expenditure on education, and multiply by 100.

$$\%\ \text{of Public Expenditure}_{pri,\,t} = \frac{\text{Public expenditure on primary education programmes}}{\text{Total public expenditure on education at year t}} \times 100$$

Possible Data Sources

Data can be compiled and collated from the government and ministerial budget reports. Since data may not be available from one single source, compilation of data from various sources may be required.

Disaggregation

Data would most likely be available at the national level only. However, for some countries, data may be available at the provincial level as well.

Interpretation

A high percentage of public expenditure on primary education program as a proportion of the total education budget indicates a high degree of government interest and priority for this area.

Limitations and Constraints

Due to the difficulty in compiling the data from all relevant sources, information can be distorted hence data must be compiled from various sources.

TRAINING PROGRAM- II: (Goal – 3 & Goal – 4)

How to Calculate Life Skills and Lifelong Learning Indicators?

How to Calculate Literacy?

TRAINING OBJECTIVES:

By the end of this training session, participants will be able to perform independently analysis of the collected Educational Data by using indicators for Life Skills and Lifelong Learning and Literacy indicators. They should be able to validate their understanding by providing examples of each type of data.

WHAT WILL THE PARTICIPANTS LEARN?

- The participants will learn what types of data is needed for the computation of Indicators for **Life Skills and Lifelong Learning** and **Literacy indicators**. They should be able to demonstrate their understanding by providing examples of each indicator.
- The participants will be able that to understand the purpose and use of Indicators for **Life Skills and Lifelong Learning** and **Literacy**.
- The participants will be able to understand and correctly calculate and use suitably the Indicators for **Life Skills and Lifelong Learning** and **Literacy indicators** using EMIS data.

ACTIVITIES:

Activity – 1: (The Participants are introduced to the definition, purpose of EFA Indicators goal – 3 which comprises Life Skills and Lifelong Learning): In the beginning, the participants are introduced to the definition, purpose of Life Skills and Lifelong Learning which comprises Goal-3 of EFA Indicators. types of data needed for the calculations of these indicators through PowerPoint presentation by the trainer. The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are

encouraged to discuss their questions with the trainer in order to help enhance their understanding.

Activity – 2: (The Participants are introduced to the method of calculation of different Life Skills and Lifelong Learning indicators): The participants are introduced to the Life Skills and Lifelong Learning indicators and their method of calculations through PowerPoint presentation by the trainer.

1. Youth Literacy Rate (15-24 years)
2. Gross Enrolment Ratio in Technical, and Vocational Education and Training (TVET)
3. Transition rates between primary and secondary systems, and secondary to higher education systems.

The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

Activity – 3: (Group Work: The Participants undertake the group work on identifying the needed information for the calculations of Life Skills and Lifelong Learning indicators, the activity is facilitated by the trainer): The participants will work on the various sources of data required for the calculation of these indicators and share their experiences.

Activity – 4: (Quiz: The Participants take a quiz related to the purpose and use of Life Skills and Lifelong Learning indicators): The participants provided with list of Life Skills and Lifelong Learning indicators, and they are required to express their understanding of utilization of each indicator.

Activity – 5: (The Participants are introduced to the definition, purpose of Literacy Indicators): In the beginning, the participants are introduced to the definition, purpose of Literacy indicators which comprises Goal - 4 of EFA and MDG's Indicators. types of data needed for the calculations of these indicators through PowerPoint presentation by the trainer. The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants

are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

Activity – 6: (The Participants are introduced to the different type and method of calculations of Literacy Indicators): The participants are introduced to Literacy indicators and their method of calculations through PowerPoint presentation by the trainer.

1. Adult Literacy Rate (15 years and above)
2. Youth Literacy Rate (age 15-24-year-old)
3. Gender Parity Index for Adult Literacy

The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

TOTAL SESSION TIME: 08 Hours (One day)

Training Agenda

Duration	Activity	What is needed?
TRAINING – I: Life Skills & Lifelong Learning - Literacy		
Day first		
1 Hour 15 Minutes	Participatory Lecture and Power point presentation by the trainer on definition, purpose and method of calculations of Life Skills and Lifelong Learning. 1. Youth Literacy Rate (15-24 years) 2. Gross Enrolment Ratio in Technical, and Vocational Education and Training (TVET) 3. Transition rates between primary and secondary systems, and secondary to higher education systems.	– Projector – Power Point Presentation

Tea Break for 15 Minutes		
1 Hour 15 Minutes	Group work, Discussions and Findings	– Projector – Flip Chart – Notebook &Pen
Lunch & Prayer Break (12:00 – 01:00)		
1 Hour 30 Minutes	Quiz and Discussion: The Participants take a quiz related to the purpose and use of Life Skills and Lifelong Learning indicators	– Projector – Power Point Presentation
1 Hour 30 Minutes	The participants are introduced to Literacy indicators and their method of calculations through PowerPoint presentation by the trainer. 1. Adult Literacy Rate (15 years and above) 2. Youth Literacy Rate (age 15-24-year-old) 3. Gender Parity Index for Adult Literacy (Group work and Discussions)	– Projector – Flip Chart – Notebook and Pen

Goal 3: Life Skills and Lifelong Learning

Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life skills programs

Introduction

The 1990 Jomtien Declaration defined life skills as 'essential learning tools and basic learning content required by human beings to be able to survive, to develop their full capacities….and to improve the quality of their lives." A decade later, the 2000 Dakar Framework for Action revisited the definition, expanding the life skills approach to include the acquisition of knowledge, values, attitudes and skills through the Four Pillars of Learning: learning to know, learning to do, learning to live together and with others, and learning to be. In an effort to provide greater specificity on the skills covered within Education for All, three typologies have been identified, namely: **basic skills** (literacy, numeracy etc), **psycho-social skills** (reflective, personal and interpersonal skills including problem solving, agency, communication, team work etc) and **practical/functional skills** (manual skills relating to specific vocations or for a specific behavior such as health). In recognition of the variety of meanings accorded to the term life skills, this guidance note hopes to provide an expansive vision of the learning and skill needs of young people and adults. Whilst countries will understandably focus their efforts on meeting this goal in areas that are most relevant to their contexts, it is hoped that the Mid Decade Assessment will provide an opportunity for reflection on what skills are needed by young people and adults and how these are reflected within the national EFA plans.

The concept of **lifelong learning** underpins this Goal, with an emphasis on continuous learning for improved knowledge, skills and competencies within personal, civic, social or employment related perspectives. As such, this notion extends to all areas and phases of life and is crucial in framing young people and adults' needs to extend and acquire new skills in a rapidly changing world.

Recognizing a need to assess progress of educational systems in all three areas, additional indicators are being proposed for the Mid-Decade Assessment with particular

attention paid to indicators concerning the development of psycho-social and practical/functional skills among young people and adults. For the purposes of this document, the definition of young people is taken to include those aged 10 to 24 and thereby of adults from over age 25.

Core EFA MDG Indicators

3	Core EFA MDG Indicators	Suggested disaggregation (If data are available)	Data Source

3.1	**Youth Literacy Rate (15-24 years)**	• Sex
		• Geographical region
		• Urban/Rural
		• Other social and economic disaggregation such as
		  ○ Ethnicity
		  ○ Language
		  ○ Disabilities
			• Household surveys
			• Population census

3.2	**Gross Enrolment Ratio in Technical, and Vocational Education and Training (TVET)**	• Sex
		• Geographical region
		• Private/public
		• Other social and economic disaggregation such as
		  ○ Ethnicity
		  ○ Language
		  ○ Disabilities
			• MoE
			• Ministry of Labour
			• Ministry of Youth and Sports
			• Relevant ministries

3.3	**Transition rates between primary and secondary systems, and secondary to higher education systems.**	• Sex
		• Level of education
		• Geographical region
		• Urban/Rural
		• Public/Private
		• Other social and economic disaggregation such as
		  ○ Ethnicity
		  ○ Language
		  ○ Disabilities
			• Annual school census
			• Household survey

3.1 Youth Literacy Rate

See details on EFA Goal 4 (Literacy) Section

3.2 Gross Enrolment Ratio in Technical and Vocational Education and Training (TVET)

Definition & Purpose

The GER is a percentage of the number of enrolments in TVET for ages 16 to 22, in relation to the population by theoretical age according to ISCED level.

In seeking to equip young people and adults with the skills for engaging in livelihoods, TVET has a vital role in the EFA process. With increased numbers of young people moving through primary schools into secondary education systems, the need for expanded TVET opportunities must be considered.

Method of Calculation and Data Required

Possible Mir

$$= \frac{\text{Number of enrolments in TVET at a particular age}}{\text{Total population of theoretical age}} \times 100\%$$

Disaggregation

The extent to which young men and women are equally able to access TVET is important to note, as are the opportunities available for this form of learning to young people from disadvantaged communities.

Interpretation

A high, and growing, TVET GER will indicate that young people are increasingly availing of this form of post-secondary education.

Limitations and Constraints

High numbers enrolled in TVET do not provide a definitive indication of the extent to which the curricula is relevant to the national and international job markets (although high enrolments will indicate the perceived utility of such courses). Further, the number

of young people graduating from these courses and gaining employment is not addressed by this indicator.

3.3 Transition rates between primary and secondary systems and secondary and higher education systems

(Refer also to Indicator 2.2 for EFA Goal 2 (UPE)

Definition & Purpose

The number of pupils (or students) admitted to the first grade of a higher level of education in a given year, expressed as a percentage of the number of pupils (or students) enrolled in the final grade of the lower level of education in the previous year. For example, the transition rate to secondary education is the percentage of children in the last grade of primary school who attend the first grade of secondary school the following year.

This indicator conveys information on the degree of access or transition from one cycle or level of education to a higher one. Viewed from the lower cycle or level of education, it is considered as an output indicator, viewed from the higher educational cycle or level, it constitutes an indicator of access. It can also help in assessing the equitability of an education system, in providing a measurement of which groups of students are excluded from secondary and post-secondary learning opportunities.

Method of Calculation and Data Required

Divide the number of new entrants in the first grade of the specified higher cycle/level of education (enrolment minus repeaters) by the number of pupils who were enrolled in the final grade of the preceding cycle/level of education in the previous school year and multiply by 100.

$$TR = \frac{\text{New entrants to the first grade of the next higher level (year y)}}{\text{Pupils in the last grade of the previous level year (y-1)}} \times 100$$

When data on new entrants to the next higher grade is not available, subtract the number of repeaters from the first grade of the next higher level to get the number of new entrants into the first grade of the next higher level. Divide the result by the total number of pupils in the last grade of the first level in the previous year.

$$TR = \frac{\left| E - R \right|}{\text{Pupils in the last grade of the previous level year (y-1)}} \times 100$$

E = Enrolment of the first grade of the next higher level at year y
R = Repeaters of the first grade of the next higher level at year y

Possible Data Sources

School register, school survey or census.

Interpretation

High transition rates indicate a high level of access or transition from one level of education to the next. They also reflect the intake capacity of the next level of education. Inversely, low transition rates can signal problems in the bridging between two cycles or levels of education resulting in fewer individuals with the skills needed for income growth as well as social development.

Limitations and Constraints

This indicator can be distorted by incorrect distinction between new entrants and repeaters, especially in the first grade of the specified higher level of education. Students who interrupted their studies for one or more years after having completed the lower level of education, together with the migrant students could also affect the quality of this indicator.

Goal 4: Literacy:

Achieving a 50 per cent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults

Literacy is a key determinant for long-term human development and a significant factor to the social and economic improvement of individuals and a country. Generally, the term 'literacy' embraces also 'numeracy' or the ability to make simple arithmetic calculations.

To have a complete picture of progress in achieving EFA, it is essential to assess the diverse policy actions and measures undertaken to develop literacy and other non-formal basic learning programs intended to meet the learning needs of the various categories of adult learners, i.e. the population 15 years of age and above. These could range from a basic literacy courses and skills development programs with a literacy component. Particular attention should be given to how well such programs address the specific learning needs of women, ethnic and cultural minorities, socially disadvantaged groups and other learners with special learning needs.

To what extent have public authorities and their partners been successful in expanding basic literacy, post-literacy and continuing education opportunities for the adult population? Are these programs successful in creating 'literate environments' and are adequate resources and infrastructures available to achieve these objectives? Countries are invited to make a comprehensive analysis of such learning opportunities provided by government departments, local authorities, NGOs, community organizations, the print media, as well as initiatives by the private sector. Obtaining information on basic education activities for adults is often a challenge but can be facilitated by including adult educators in the assessment process.

4	Core EFA MDG Indicators	Disaggregation	Data Source

4.1	**Adult Literacy Rate (15 years and above)**	• Sex
		• Geographical region
		• Urban/Rural
		• Other social and economic disaggregation such as
		  ○ Ethnicity, caste
		  ○ Language
		  ○ Disabilities
			• Population censuses
			• Household surveys
			• Literacy surveys

4.2	**Youth Literacy Rate (age 15-24-year-old)**	• Sex
		• Geographical region
		• Urban/Rural
		• Other social and economic disaggregation such as
		  ○ Ethnicity, caste
		  ○ Language
		  ○ Disabilities
			• Population censuses
			• Household surveys
			• Literacy surveys

4.3	**Gender Parity Index for Adult Literacy**	• Geographical region
		• Urban/Rural
		• Other social and economic disaggregation such as
		  ○ Ethnicity, caste
		  ○ Language
		  ○ Disabilities
			• Population censuses
			• Household surveys
			• Literacy surveys

4.1 Adult Literacy Rate (15 years and above)

Definition and Purpose

Adult literacy rate is defined as the percentage of the population aged 15 years and over who can both read and write with understanding a short simple statement related to everyday life. It reflects the accumulated achievement of the primary education system and adult literacy programs in imparting basic literacy skills to the population allowing them to apply such skills in daily life and to continue learning and communicating using the written word. This indicator provides longer-term indication of the success of the formal and non-formal education system.

Calculation Method and Data Required

Divide the number of literate adults aged 15 years and above by the corresponding age-group population and multiply by 100.

$$\text{Adult Literacy Rate (15 years and above)} = \frac{\text{Literate population aged 15 years and over in year t}}{\text{Population aged 15 years and over in year t}} \times 100$$

Possible Data Sources

Literacy data may be derived from population censuses, household surveys and literacy surveys. Data for the total population is derived from national censuses or sample surveys. However, not all censuses or surveys include specific questions for assessing literacy. In some countries where literacy questions are not included, a person's educational attainment (years of schooling completed) is used as proxy to assess literacy status. A common practice is to consider those with no schooling as illiterate and those who have attended school up to at least Grade 6 as literate. Many household surveys, including the MICS, DHS, and LSMS, collect literacy data that provide complementary data for countries without a recent census. However, definitions are not necessarily standardized.

Most of the available data on literacy are based on reported literacy rather than on tested literacy and in some cases are derived from other proxy information.

Disaggregation Issues

National level statistics do not often capture detailed reality in a country thus it is particularly important to explore literacy statistics by sub-groups with a special focus on the disadvantaged groups who need to be targeted to ensure progress towards meeting the EFA goals. However, the context will be different among countries hence the need to identify specific sub-groups by country for further statistical analysis, such as language minorities, ethnic minorities, and religious groups, or people with disabilities in addition to the common sub-groups such as age, sex or geographical regions.

Interpretation

A high adult literacy rate suggests an effective primary education system and/or adult literacy programs that have enabled a large proportion of the population to acquire the ability of using the written word (and making simple arithmetic calculations) in daily life. The literacy rate, however, cannot exceed 100 per cent.

Literacy rates are often presented and analyzed in conjunction with the absolute numbers of illiterates since improvements in literacy rates may sometimes be accompanied by increases in the illiterate population due to changing demographic structure. Reasons for failing to achieve the literacy standard may include low quality of schooling, difficulties in attending school or dropping out before reaching Grade 6.

It should be noted that the ultimate goal is not only to ensure that all people including young adults become literate, but also that they have opportunity to reach higher levels of proficiency in literacy to improve the quality of their life. The literacy rate discussed and calculated for this analysis, however, is not intended to measure the quality and adequacy of the level of literacy needed for individuals to function in a society (http://unstats.un.org).

Limitations and Constraints

The measurement of literacy can vary from simply asking “Are you literate or not?” to testing to assess literacy skills. In some cases, literacy is measured crudely in population censuses, either through individual self-declaration, or by the head of the household and/or through the assumption that people with x years of schooling are literate and those below are illiterate. This creates difficulty in comparison of literacy data over time, even for the same survey.

The latest UN Principles and Recommendations for Population and Housing Censuses advise countries against adopting a proxy measurement based on educational attainment. It recommends that literacy questions be administered as part of national censuses and household surveys, or as part of a post-census sample enumeration. Shortcomings in the definition of literacy, measurement problems and infrequency of censuses and literacy surveys weaken this indicator as a means of monitoring education outcomes related to the goal of achieving universal primary education (UNESCO 1998).

It is important to align measurements of literacy with the standard international definition given above and, where possible, to administer literacy tests on a sample basis to verify and improve the quality of literacy statistics (UNESCO 1998).

The language used to measure literacy should also be considered. For multilingual countries, literacy should be considered in multilingual contexts. Simply asking individuals if they can read and write might generate a positive reply in reference to their mother tongue, but ‘no’ in reference to the national/official language(s). The definition of literacy also needs to be further elaborated beyond the traditional dichotomy to present degrees of functionality.

4.2 Youth Literacy Rate (age 15-24-year old)

Definition and Purpose

The literacy rate of 15–24-year-old or the youth literacy rate is the percentage of the 15–24 years-old population who can both read and write with understanding a short simple statement on everyday life.

This indicator indicates the effectives of the primary education system over the previous 10 years or so. It is often seen as a proxy measure of social progress and economic achievement since it shows the effectiveness of the primary and secondary education systems. Inadequate levels of reading constitute a serious obstacle for the successful participation of young people and adults in society.

Method of Calculation

The usual method of computation is to divide the number of people ages 15–24 who are literate by the total population in the same age group, and multiply by 100.

$$\text{Youth Literacy Rate (age 15-24 year olds)} = \frac{\text{Literate population aged 15-24 years old in year t}}{\text{Population aged 15-24 years old in year t}} \times 100$$

As mentioned above, youth literacy data may also be derived from population censuses, household surveys and literacy surveys. Data for the total population is derived from national censuses or sample surveys.

Disaggregation

Like adult literacy data, where data is available, the indicator can be disaggregated by sex, region, urban/rural, social and ethnic groups, linguistic groups, disabilities, and vulnerable groups.

Interpretation

A high youth literacy rate suggests an effective primary education system that have enabled a large proportion of the young population to acquire the ability of using the written text and making simple arithmetic calculations in daily life.

Comparing the youth literacy rates with adult literacy rates shows the progress and achievements in literacy of the younger generation compared to total adult population. It will also be useful reference for the government in deciding which age group should literacy programs target.

Limitations and Constraints

As mentioned in the adult literacy section, data may only be available for selected years and for selected geographical regions and interested groups depending on the year of censuses and surveys.

Different definitions of literacy in countries and proxy data also makes data incomparable. Some countries define a different age group for youth literacy instead of the 15 to 24 years old international standard.

4.3 Gender Parity Index for Adult Literacy

Definition and Purpose

The Literacy Gender Parity Index is the ratio of the female literacy rate to the male literacy rate for the 15 years and above age group.

The indicator measures progress towards gender equity in literacy and learning opportunities for women in relation to those for men. It also measures a presumed outcome of attending school and a key indicator of empowerment of women in society. Literacy is a fundamental skill to empower women to take control of their lives, to engage directly with authority and to gain access to the wider world of learning.

Method of Calculation

The indicator is derived by dividing the literacy rate of females aged 15 years and above by the literacy rate of males for the same age group and multiply by 100.

$$\text{Gender Parity Index for Adult Literacy} = \frac{\text{Adult female literacy rate}}{\text{Adult male literacy rate}} \times 100$$

Possible Data Source

As mentioned above, gender parity index for adult literacy may also be derived from population censuses, household surveys and literacy surveys. Data for the total population is derived from national censuses or sample surveys.

Disaggregation

Where data is available, the indicator can be disaggregated by region, urban/rural, social and ethnic groups, linguistic groups, disabilities, and other vulnerable groups.

Interpretation

When the literacy gender parity index shows a value equal to 1, female literacy and male literacy rates are equal. A value less than 1 indicates that proportionately fewer women than men have basic literacy skills, and conversely, a value exceeding 1 indicates that proportionately fewer men have basic literacy skills. Note that the value of the gender parity index may be affected by differences in the life expectancy between men and women, especially for the older age-groups in countries where women on average live longer than men. In such cases, one should derive literacy gender parity indices by age groups.

Limitations and Constraints

As mentioned in the adult literacy section, data may only be available for certain years and for selected geographical regions and interested groups, depending on the year of censuses and surveys. Different definitions on literacy in countries and proxy data also make data incomparable.

TRAINING PROGRAM- III: [Goal – 5]

How to Calculate Indicators For Gender Parity And Equality?

TRAINING OBJECTIVES:

By the end of this training session, participants will be able to perform independently analysis of the collected Educational Data by using indicators for Gender Parity and Equality. They should be able to validate their understanding by providing examples of each type of data.

WHAT WILL THE PARTICIPANTS LEARN?

- The participants will learn what types of data is needed for the computation of Indicators for Gender Parity and Equality. They should be able to demonstrate their understanding by providing examples of each indicator.
- The participants will be able that to understand the purpose and use of Indicators for Gender Parity and Equality
- The participants will be able to understand and correctly calculate and use suitably the Indicators for Gender Parity and Equality using EMIS data.

ACTIVITIES:

Activity – 1: (The Participants are introduced to the definition, purpose and use of EFA Indicators, goal – 5 which comprises Gender Parity and Equality indicators): In the beginning, the participants are introduced to the definition, purpose of Gender Parity and Equality Indicators which comprises Goal-5 of EFA Indicators. types of data needed for the calculations of these indicators through PowerPoint presentation by the trainer. The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

Activity – 2: (The Participants are introduced to different types of Gender Parity and Equality Indicators): The participants are introduced to the Gender Parity and Equality indicators and their method of calculations through PowerPoint presentation by the trainer.

1. Gender Parity Index for Adult Literacy
2. Gender Parity Index for GER in ECCE
3. Gender Parity Index for GIR in Primary Education
4. Gender Parity Index for NIR in Primary Education
5. Gender Parity Index for
    - GER in Primary Education
    - GER in Secondary Education
6. Gender Parity Index for
    - NER in Primary Education
    - NER in Secondary Education

The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

Activity – 3: (Group Work: The Participants undertake the group work on identifying the needed information for the calculations of Gender Parity and Equality indicators, the activity is facilitated by the trainer): The participants will work on the various sources of data required for the calculation of these indicators and share their experiences.

Activity – 4: (Quiz and Discussion: The Participants take a quiz related to the purpose and use of Access & Participation indicators): The participants provided with list of above indicators, and they are required to express their understanding of utilization of each indicator.

Activity – 5: (The Participants are introduced to some other Gender Parity and Equality Indicators): The participants are introduced to some other Gender Parity and Equality indicators and their method of calculations through PowerPoint presentation by the trainer.

7. Gender Parity Index for Survival Rate to Grade 6
8. Gender Parity Index for Transition Rate to Secondary Education
9. Percentage of Female Enrollment in
    - Primary Education
    - Secondary Education
    - Vocational and Technical Education
10. Percentage of Female Teacher in
    - Primary Education
    - Secondary Education
    - Vocational and Technical Education
11. Percentage of Repetition of Girls and Boys in Primary and Secondary Levels

The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

Activity – 6: (Group Work: The Participants undertake the group work on identifying the needed information for the calculations of above indicators, the activity is facilitated by the trainer): The participants will work on the various sources of data required for the calculation of these indicators and share their experiences.

Activity – 7: (Quiz and Discussion: The Participants take a quiz related to the purpose and use of Gender Parity and Equality indicators): The participants provided with list of above indicators, and they are required to express their understanding of utilization of each indicator.

Activity – 8: (The Participants are introduced to the definition, purpose and method of calculation for EFA Indicators and goal – 2 which comprises some other Access & Participation Indicators): In the beginning, the participants are introduced to the definition, purpose of Achieving Universal Primary Education which comprises Goal-2 of EFA and MDG's Indicators. types of data needed for the calculations of these indicators through PowerPoint presentation by the trainer. The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine

their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

TOTAL SESSION TIME: 16 Hours (Two days)

Training Agenda

Duration	Activity	What is needed?
TRAINING – IV: Gender Parity and Equality Indicators		
Day first		
1 Hour 15 Minutes	Participatory Lecture and Power point presentation The Participants are introduced to the definition, purpose and use of EFA Indicators, goal – 5 which comprises Gender Parity and Equality indicators	– Projector – Power Point Presentation
Tea Break for 15 Minutes		
1 Hour 15 Minutes	The participants are introduced to the Gender Parity and Equality indicators and their method of calculations through PowerPoint presentation by the trainer. 1. Gender Parity Index for Adult Literacy 2. Gender Parity Index for GER in ECCE 3. Gender Parity Index for GIR in Primary Education 4. Gender Parity Index for NIR in Primary Education 5. Gender Parity Index for o GER in Primary Education o GER in Secondary Education 6. Gender Parity Index for	– Projector – Flip Chart – Notebook and Pen

	○ NER in Primary Education ○ NER in Secondary Education	
Lunch & Prayer Break (12:00 – 01:00)		
1 Hour 30 Minutes	Group Work: The Participants undertake the group work on identifying the needed information for the calculations of Gender Parity and Equality indicators, the activity is facilitated by the trainer	– Projector – Power Point Presentation
1 Hour 30 Minutes	Quiz and Discussion: The Participants take a quiz related to the purpose and use of Gender Parity and Equality Indicators	– Projector – Flip Chart – Notebook and Pen
Day Second		
1 Hour 15 Minutes	The participants are introduced to some other Gender Parity and Equality indicators and their method of calculations through PowerPoint presentation by the trainer. 7. Gender Parity Index for Survival Rate to Grade 6 8. Gender Parity Index for Transition Rate to Secondary Education 9. Percentage of Female Enrollment in ○ Primary Education ○ Secondary Education ○ Vocational and Technical Education 10. Percentage of Female Teacher in ○ Primary Education	– Projector – Power Point Presentation

	○ Secondary Education ○ Vocational and Technical Education 11. Percentage of Repetition of Girls and Boys in Primary and Secondary Levels	
Tea Break for 15 Minutes		
1 Hour 15 Minutes	Continue: Participatory Lecture and Discussions Through Power Point Presentations	– Projector – Flip Chart – Notebook and Pen
Lunch & Prayer Break (12:00 – 01:00)		
1 Hour 30 Minutes	Group Work: The Participants undertake the group work on identifying the needed information for the calculations of above indicators, the activity is facilitated by the trainer	– Projector – Power Point Presentation
1 Hour 30 Minutes	Quiz and Discussion: The Participants take a quiz related to the purpose and use of Gender Parity and Equality indicators	– Projector – Flip Chart – Notebook and Pen

Goal 5: Gender Parity and Equality

Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girl's full and equal access to and achievement in basic education of good quality

Introduction

The significance and implications for assessment of this so-called "Gender Goal" only becomes clear when there is a clear understanding on what is meant by "gender" and" gender equality". Gender refers to "the roles and responsibilities of men and women that are created in our families, our societies and our cultures. The concept of gender also includes the expectations held about the characteristics, aptitudes and likely behaviors of both women and men" (source: UNESCO Gender Toolkit). It is clearly distinguished from sex, which describes the biological differences between men and women. "Gender equality" means that "women and men have equal conditions for realizing their full human

rights and for contributing to, and benefiting from, economic, social, cultural and political development". It is therefore the equal valuing by society of the similarities and the differences and their roles they play (source: UNESCO Gender Toolkit).

Gender is an issue which runs across all the EFA goals, and there is a risk that by featuring it in a single goal it can be isolated from others. To prevent this risk, the Guidelines for the Asia and Pacific Education for All Mid-Decade Assessment seeks to mainstream Gender Indicators throughout the six goals, ensuring that a gender lens[1] is brought to bear on all aspects of Education for All. Providing and ensuring gender disaggregated statistical data and measuring gender parity under each goal is a precondition in all the assessment. However, gender parity is not enough, and the ultimate goal is to measure the progress towards achieving true gender equality in terms of access (gender equality to education), quality of process (gender equality in education) and achievement and outcome (gender equality through education) in both primary and secondary levels. The analysis and interpretation of the indicators thus will be the critical part of assessing and measuring progress of this Goal.

Core EFA MDG Indicators

5	Indicators	Disaggregation	Data Source
5.1	**Gender Parity Index for:** • **Adult Literacy**	• Geographical region • Urban/Rural • Other social and economic disaggregation such as ○ Ethnicity, caste ○ Language ○ Disabilities	• Annual school census • Population censuses • Household and specialized surveys
5.2	**Gender Parity Index for:** • **GER in ECCE**		
5.3	**Gender Parity Index for:** • **GIR in Primary Education**		
5.4	**Gender Parity Index for:** • **NIR in Primary Education**		
5.5	**Gender Parity Index for:** • **GER in Primary Education** • **GER in Secondary Education**		
5.6	**Gender Parity Index for:** • **NER in Primary Education** • **NER in Secondary Education**		
5.7	**Gender Parity Index for:** • **Survival Rate to Grade 6**		
5.8	**Gender Parity Index for:** • **Transition Rate to Secondary Education**		
5.9	**Percentage of Female Enrolment in** • **Primary education** • **Secondary education** • **Vocational and technical education**	• Geographical region • Urban/Rural • Public/private	• Annual school census • Various institutional data collections
5.10	**Percentage of Female Teachers in** • **Primary education** • **Secondary education** • **Vocational and technical education**		
5.11	**Percentage of repetition of girls and boys in primary and secondary levels**		

5.1 GPI for Adult Literacy

Definition and Purpose

The Literacy GPI is used to assess gender differences in literacy rates among adult populations. It is calculated as the ratio of literacy rate for females divided by the literacy rate for males. It would be wrong to mention as GPI for the ratio of absolute numbers, and it must be presented as a ratio. The indicator measures progress towards gender parity literacy and is especially revealing if disaggregated amongst sub-populations (i.e., ethnicity, caste, socio-economic).

Method of Calculation and Data Required

$$\text{Gender Parity Index for Adult Literacy} = \frac{\text{Adult female literacy rate}}{\text{Adult male literacy rate}} \times 100$$

Possible Data Source

Countries usually collect the basic data for literacy through the census process, but this often relies on self-reported literacy estimates. Special household surveys can also shed light on literacy rates, though these are often sub-national in nature

Disaggregation

Where data is available, the indicator can be disaggregated by region, urban/rural, social and ethnic groups, linguistic groups, disabilities, and other vulnerable groups. Where national data is not available, it is best to report only on sub-national figures.

Interpretation

A value of less than one indicates a difference in favor of males; a value above one indicates a difference in favor of females; a value close to one indicates gender parity. However, it can be assumed that there is no disparity if GPI value ranges between 0.97 and 1.03. Great disparity is often expected amongst older populations, gaps that should have been significantly narrowed over time through universal primary education.

Limitations and Constraints

Disaggregated data by gender must be available to be able to calculate the GPI.

5.2 GPI for GER in ECCE

Definition and Purpose

The GPI for GER in ECCE is used to assess gender differences in access to organized early learning. It is calculated as the ratio of GER in ECCE for girls divided by the rate for boys. The indicator measures progress towards gender parity in ensuring that all children have access to quality organized learning and care.

Method of Calculation and Date Required

$$\text{Gender Parity Index for GER in ECCE} = \frac{\text{GER in ECCE (Female)}}{\text{GER in ECCE (Male)}} \times 100$$

Possible Data Source

Countries usually collect the basic data for the above-mentioned indicator as part of the EMIS. Having such data by gender allows for the calculation of GPI for ECCE. If the data collected does not include community based and/or home-based childcare centres, this should be mentioned.

Disaggregation

Where data is available, the indicator can be disaggregated by region, urban/rural, social and ethnic groups, linguistic groups, disabilities, and other vulnerable groups. It is especially interesting to compare the GPI for GER in ECCE between private and public/community-based centers.

Interpretation

A value of less than one indicates a difference in favor of males; a value above one indicates a difference in favor of females; a value close to one indicates gender parity. However, it can be assumed that there is no disparity if GPI value ranges between 0.97 and 1.03. In many countries, one will find girls enrolled in government run or community-based centers while boys are found in more expensive private centres.

Limitations and Constraints

Disaggregated data by gender must be available to be able to calculate the GPI.

5.3 GPI for Gross Intake Rate (GIR) in Primary Education

Definition and Purpose

The GPI for Primary GIR is used to assess gender differences in intake rates between boys and girls. It is calculated as the ratio of the primary intake rate for girls divided by the indicator for boys. It would be wrong to mention as GPI for the ratio of absolute numbers such as number of teachers, number of enrolments. The indicator measures progress towards gender parity in intake.

Method of Calculation and Date Required

$$\text{Gender Parity Index for GIR in Primary Education} = \frac{\text{GIR in Primary Education (Female)}}{\text{GIR in Primary Education (Male)}} \times 100$$

Possible Data Source

Countries usually collect the basic data for the above-mentioned indicator through the national EMIS. Nationally representative surveys, such as MICS or DHS can also provide comparative figures to the EMIS. Sub-national surveys allow for details to be gathered for specific sub-national populations.

Disaggregation

Where data is available, the indicator can be disaggregated by region, urban/rural, social and ethnic groups, linguistic groups, disabilities, and other vulnerable groups.

Interpretation

A value of less than one indicates a difference in favor of males; a value above one indicates a difference in favor of females; a value close to one indicates gender parity. However, it can be assumed that there is no disparity if GPI value ranges between 0.97 and 1.03.

Limitations and Constraints

Disaggregated data by gender must be available to be able to calculate the GPI.

5.4 GPI for Net Intake Rate (NIR) in Primary Education

Definition and Purpose

The GPI for Primary NIR is used to assess gender differences by appropriate age of intake. It is calculated as the ratio of the female primary NIR divided by the NIR for males.

Method of Calculation and Date Required

$$\text{Gender Parity Index for NIR in Primary Education} = \frac{\text{NIR in Primary Education (Female)}}{\text{NIR in Primary Education (Male)}} \times 100$$

Possible Data Source

Countries usually collect the basic data for the above-mentioned indicator through the national EMIS. Nationally representative surveys, such as MICS or DHS can also provide comparative figures to the EMIS. Sub-national surveys allow for details to be gathers for specific sub-national populations.

Disaggregation

Where data is available, the indicator can be disaggregated by region, urban/rural, social and ethnic groups, linguistic groups, disabilities, and other vulnerable groups.

Interpretation

A value of less than one indicates a difference in favor of males; a value above one indicates a difference in favor of females; a value close to one indicates gender parity. However, it can be assumed that there is no disparity if the GPI value ranges between 0.97 and 1.03. The use of the NIR gives deeper insight into age differences in boy and girl intake with obvious advantages and disadvantages this can provide to one sex or the other.

Limitations and Constraints

Disaggregated data by gender must be available to be able to calculate the GPI.

5.5 GPI for:

- **GER in Primary Education**
- **GER in Secondary Education**

Definition and Purpose

The GPI for GER in Primary or Secondary Education is commonly used to assess gender differences in gross enrolment at the primary or secondary level. It measures progress towards gender parity in interested areas such as literacy, access and participation in UPE for women in relation to those for men.

Method of Calculation and Date Required

GPI for GER in Primary Education:

$$\text{Gender Parity Index for GER in Primary Education} = \frac{\text{GER in Primary Education (Female)}}{\text{GER in Primary Education (Male)}} \times 100$$

GPI for GER in Secondary Education:

$$\text{Gender Parity Index for GER in Secondary Education} = \frac{\text{GER in Secondary Education (Female)}}{\text{GER in Secondary Education (Male)}} \times 100$$

Possible Data Source

Countries usually collect the basic data for the above-mentioned indicator through the national EMIS. Nationally representative surveys, such as MICS or DHS can also provide comparative figures to the EMIS. Sub-national surveys allow for details to be gathered for specific sub-national populations.

Disaggregation

Where data is available, the indicator can be disaggregated by region, urban/rural, social and ethnic groups, linguistic groups, disabilities, and other vulnerable groups.

Interpretation

A value of less than one indicates a difference in favor of males; a value above one indicates a difference in favor of females; a value close to one indicates gender parity. However, it can be assumed that there is no disparity if the GPI value ranges between 0.97 and 1.03. It should be noted that while the value of .99 shows almost no disparity, and can be considered good, it is not necessarily an indicator of a healthy education system. A GPI for Primary GER can be .99 with actual enrolment just 50 per cent for both boys and girls. Any difference between GPI for NER and GER may be the result of either boys or girls being enrolled late, or if there is preference given to keeping boys or girls in school longer, even after repeating grades.

Limitations and Constraints

Disaggregated data by gender must be available to be able to calculate the GPI.

5.6 GPI for

- **NER in Primary Education**
- **NER in Secondary Education**

Definition and Purpose

The GPI for NER in Primary or Secondary Education is used to assess gender differences in primary and secondary net enrolment. The indicator measures progress towards gender parity in enrolment at the primary and secondary level.

Method of Calculation and Date Required

GPI for NER in Primary Education:

$$\text{Gender Parity Index for NER in Primary Education} = \frac{\text{NER in Primary Education (Female)}}{\text{NER in Primary Education (Male)}} \times 100$$

GPI for NER in Secondary Education:

$$\text{Gender Parity Index for NER in Secondary Education} = \frac{\text{NER in Secondary Education (Female)}}{\text{NER in Secondary Education (Male)}} \times 100$$

It is important that countries clearly define the parameters of secondary education data being used, and whether this is for only lower secondary or all levels of secondary, with the number of Grades clearly stated.

Possible Data Source

Countries usually collect the basic data for the above-mentioned indicator through the national EMIS. Nationally representative surveys, such as MICS or DHS can also provide comparative figures to the EMIS. Sub-national surveys allow for details to be gathers for specific sub-national populations.

Disaggregation

Where data is available, the indicator can be disaggregated by region, urban/rural, social and ethnic groups, linguistic groups, disabilities, and other vulnerable groups.

Interpretation

A value of less than one indicates a difference in favor of males; a value above one indicates a difference in favor of females; a value close to one indicates gender parity. However, it can be assumed that there is no disparity if GPI value ranges between 0.97 and 1.03. It should be noted that while the value of .99 shows almost no disparity, and can be considered good, it is not necessarily an indicator of a healthy education system.

A GPI for Primary GER can be .99 with actual enrolment just 50 per cent for both boys and girls. Any difference between GPI for NER and GER may be a result of either boys or girls being enrolled late, or if there is preference given to keeping boys or girls in school longer, even after repeating grades.

Limitations and Constraints

Disaggregated data by gender must be available to be able to calculate the GPI.

5.7 GPI for Survival rate to Grade 6

Definition and Purpose

The GPI for Grade 5 survival rates is used to assess gender differences in primary completion. It is calculated as the ratio of primary survival for females divided by the survival rate for males. Survival GPI provides a far clearer picture of gender disparity in completion than does the gender comparison of the drop-out rate.

Method of Calculation and Date Required

$$\text{Gender Parity Index for Survival rate to Grade 6} = \frac{\text{Survival rate to Grade 6 (Female)}}{\text{Survival rate to Grade 6 (Male)}} \times 100$$

Possible Data Source

Countries usually collect the basic data for the above-mentioned indicator through the national EMIS. Nationally representative surveys, such as MICS or DHS can also provide comparative figures to the EMIS. Sub-national surveys allow for details to be gathers for specific sub-national populations.

Disaggregation

Where data is available, the indicator can be disaggregated by region, urban/rural, social and ethnic groups, linguistic groups, disabilities, and other vulnerable groups.

Interpretation

A value of less than one indicates a difference in favor of males; a value above one indicates a difference in favor of females; a value close to one indicates gender parity. However, it can be assumed that there is no disparity if GPI value ranges between 0.97 and 1.03. There are very likely to be a wide range of rates between different sub-populations and indicative survey data can be referred to if the existing EMIS is not able to produce such data.

Limitations and Constraints

Disaggregated data by sex must be available to be able to calculate the GPI.

5.8 GPI for Transition Rate to Secondary Education

Definition and Purpose

The GPI for Secondary Transition Rates is calculated as the ratio of transition rates for girls divided by the transition rates for males. The indicator measures progress towards gender parity in completing primary and entering secondary and should not be confused with parity in secondary enrolment rates in general.

Method of Calculation and Date Required

$$\text{Gender Parity Index for Transition rate to Secondary Education} = \frac{\text{Transition rate to Secondary Education (Female)}}{\text{Transition rate to Secondary Education (Male)}} \times 100$$

Countries usually collect the basic data for the above-mentioned indicators. Having such data by gender allows for the calculation of GPI for these indicators. See more details in the “possible data source” of each indicator section.

Disaggregation

Where data is available, the indicator can be disaggregated by region, urban/rural, social and ethnic groups, linguistic groups, disabilities, and other vulnerable groups.

Interpretation

A value of less than one indicates a difference in favor of males; a value above one indicates a difference in favor of females; a value close to one indicates gender parity. However, it can be assumed that there is no disparity if GPI value ranges between 0.97 and 1.03. Considering that many children drop out in the last year of primary without taking the final school leaving examination, the GPI Transition Rate allows deeper insight for analysis and potential policy action.

Limitations and Constraints

Disaggregated data by sex must be available to be able to calculate the GPI.

5.9 Percentage of Female Enrolment

Definition and Purpose

Number of female enrolment expressed as a percentage of total enrolment in one particular education level such as primary, secondary, vocational and technical. This indicator helps to assess the proportion of female participation in such education level.

Method of Calculation and Data Required

Divide the total number of female enrolment by the total enrolment in a given school-year, and multiply by 100. Following is the list of core indicators on female participation to assess the above-mentioned goal.

$$\text{\% Female Enrolment}_{pri,\,t} = \frac{\text{Number of female enrolment in primary education in school-year t}}{\text{Total number of enrolment in primary education in school-year t}} \times 100$$

$$\text{\% Female Enrolment}_{Sec,\,t} = \frac{\text{Number of female enrolment in secondary education in school-year t}}{\text{Total number of enrolment in secondary education in school-year t}} \times 100$$

$$\text{\% Female Enrolment}_{VocTec,\,t} = \frac{\text{Number of female enrolment in Voc/Tec education in school-year t}}{\text{Total number of enrolment in Voc/Tec education in school-year t}} \times 100$$

Possible Data Sources

Countries usually collect the enrolment data through annual school census. It is important that the data are disaggregated by gender to be able to calculate the percentage of female enrolment.

Disaggregation

Where data is available, the indicator can be disaggregated by region, urban-rural, and public-private.

Interpretation

This indicator shows the degree of female participation in these education levels. However, one may need to look at population structure of those particular age-groups to interpret correctly.

Limitations and Constraints

Coverage of the data, especially in secondary level may not be complete since some data cover only public institutions or partial geographical distributions.

5.10 Percentage of Female Teachers

Definition and Purpose

Number of female teachers expressed as a percentage of total number of teachers in one particular education level such as primary, secondary, vocational and technical. This indicator helps to assess the proportion of female participation in such education level. Teachers are defined as persons whose professional activity involves the transmission of knowledge, attitudes and skills that are stipulated in a formal curriculum program to students enrolled in a formal educational institution.

Method of Calculation and Data Required

Divide the number of female teachers by the total number of teachers in a given schoolyear and multiply by 100.

$$\text{Per cent Female Teachers}_{pri,\,t} = \frac{\text{Number of female teachers in primary education in school-year t}}{\text{Total number of teachers in primary education in school-year t}} \times 100$$

$$\text{Per cent Female Teachers}_{Sec,\,t} = \frac{\text{Number of female teachers in secondary education in school-year t}}{\text{Total number of teachers in secondary education in school-year t}} \times 100$$

$$\text{Per cent Female Teachers}_{VocTec,\,t} = \frac{\text{Number of female teachers in Voc/Tec education in school-year t}}{\text{Total number of teachers in Voc/Tec education in school-year t}} \times 100$$

Following is the list of core indicators on female participation to assess the above-mentioned goal.

Possible Data Sources

Countries usually collect teacher data through the annual school census. Disaggregating the data by sex would allow for the calculation of the percentage of female teachers. Data on teachers, especially for the public sector, can also be gathered from the departments in the Ministries responsible for keeping teacher records and paying salaries.

Disaggregation

This indicator can be calculated by level of education, by geographical location (region, rural-urban), by type of institutions (public and private), by teacher's age-groups and by teacher's qualifications.

Interpretation

This indicator shows the gender composition of the teaching force. It also helps in assessing the need for opportunities and/or incentives to encourage women to participate in teaching activities at a given level of education.

The number of female teachers approaching 50 per cent indicates gender parity in the composition of the teaching force. A value greater than 50 per cent indicates more opportunities for women to participate in teaching activities at a specific level, grade or program of education. If possible, this data should be analyzed in relation to general labour market trends for females in the country, if this data is available.

Limitations and Constraints

This indicator should be based on reliable data on teaching staff by gender (full and/or part-time teachers) at each level of education. When calculating, care should be exercised to ensure that the number of female teachers and the total number of teachers correspond to the same type of institution, full or part-time. Such calculation should include all staff involved in teaching. This indicator measures the level of gender representation in the teaching profession rather than the effectiveness and quality of teaching.

Training Program- VI: (Goal – 6)
HOW TO CALCULATE THE QUALITY EDUCATION INDICATORS?

TRAINING OBJECTIVES:

By the end of this training session, participants will be able to perform independently analysis of the collected Educational Data by using Quality indicators. They should be able to validate their understanding by providing examples of each type of data.

WHAT WILL THE PARTICIPANTS LEARN?

- The participants will learn what types of data is needed for the computation of Quality Indicators.
- The participants will be able that to differentiate between different types of Quality Indicators
- The participants will be able to understand and correctly calculate and use suitably the Quality Indicators using EMIS data.

Activity – 1: (The Participants are introduced to the definition, purpose and use of EFA Indicators, goal – 6 which comprises Quality Education Indicators): In the beginning, the participants are introduced to the definition, purpose of Quality Education Indicators which comprises Goal - 6 of EFA Indicators. types of data needed for the calculations of these indicators through PowerPoint presentation by the trainer. The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

Activity – 2: (The Participants are introduced to different Types of Quality Education Indicators): The participants are introduced to the Quality Education indicators and their method of calculations through PowerPoint presentation by the trainer.

1. Survival Rate to Grade 6
2. Percentage of Primary School Teachers having the Required Academic Qualifications
3. Percentage of School Teachers who are Certified to Teach According to National Standards for:
    - Early Childhood Care and Education
    - Primary Education
    - Secondary Education
    - Non-Formal Education
4. Pupil-Teacher Ratio (PTR) for:
    - Primary Education
    - Secondary Education
5. Pupil-Class ratio (PCR) for:
    - Primary Education
    - Secondary Education
6. Pupil-Textbook ratio (PBR) for:
    - Primary Education
    - Secondary Education

The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

Activity – 3: (Group Work: The Participants undertake the group work on identifying the needed information for the calculations of Quality Education indicators, the activity is facilitated by the trainer): The participants will work on the various sources of data required for the calculation of these indicators and share their experiences.

Activity – 4: (Quiz and Discussion: The Participants take a quiz related to the purpose and use of Quality Education indicators): The participants provided with list of Quality Education indicators, and they are required to express their understanding of utilization of each indicator.

Activity – 5: (The Participants are introduced to some other Types of Quality Education Indicators): The participants are introduced to the Quality Education indicators and their method of calculations through PowerPoint presentation by the trainer.

7. Public Expenditure on Education as Per cent of Total Government Expenditure
8. Public Expenditure on Education as Per cent of Gross National Product (GNP)
9. Public Expenditure on Primary/Secondary Education per Pupil as Per cent of GNP per Capita
10. Percentage of schools with improved drinking water sources
11. Percentage of schools with adequate sanitation facilities.

The participants take part in the discussion related to each topic and are able to answer trainer's questions to determine their understanding of the topic. The participants are encouraged to discuss their questions with the trainer in order to help enhance their understanding.

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Activity – 6: (Group Work: The Participants undertake the group work on identifying the needed information for the calculations of above Quality Education indicators, the activity is facilitated by the trainer): The participants will work on the various sources of data required for the calculation of these indicators and share their experiences.

Activity – 7: (Quiz: The Participants take a quiz related to the purpose and use of Quality Education indicators): The participants provided with list of above Quality Education indicators, and they are required to express their understanding of utilization of each indicator.

Activity – 8: (The Participants are Evaluated by Trainer through questions and answers from participants regarding different types of indicators and their use and importance in the analysis of educational data

TOTAL SESSION TIME: 16 Hours (Two days)

Training Agenda

Duration	Activity	What is needed?
TRAINING – I: QUALITY EDUCATION INDICATORS		
Day first		
1 Hour 15 Minutes	Through Participatory Lecture and Power point presentation by the trainer The Participants are introduced to the definition, purpose and use of EFA Indicators, goal – 6 which comprises Quality Education Indicators	– Projector – Power Point Presentation
Tea Break for 15 Minutes		
1 Hour 15 Minutes	The participants are introduced to the Quality Education indicators and their method of calculations through PowerPoint presentation by the trainer. 1. Survival Rate to Grade 6 2. Percentage of Primary School Teachers having the Required Academic Qualifications 3. Percentage of School Teachers who are Certified to Teach According to National Standards for: ○ Early Childhood Care and Education ○ Primary Education ○ Secondary Education ○ Non-Formal Education 4. Pupil-Teacher Ratio (PTR) for: ○ Primary Education ○ Secondary Education 5. Pupil-Class ratio (PCR) for: ○ Primary Education ○ Secondary Education 6. Pupil-Textbook ratio (PBR) for: ○ Primary Education	– Projector – Flip Chart – Notebook and Pen

	○ Secondary Education	
Lunch & Prayer Break (12:00 – 01:00)		
1 Hour 30 Minutes	Group Work: The Participants undertake the group work on identifying the needed information for the calculations of Quality Education indicators, the activity is facilitated by the trainer	– Projector – Power Point Presentation
1 Hour 30 Minutes	Quiz and Discussion: The Participants take a quiz related to the purpose and use of Quality Education indicators	– Projector – Flip Chart – Notebook and Pen
Day Second		
1 Hour 15 Minutes	Participatory Lecture and Power point presentation by the trainer through which participants are introduced to the Quality Education indicators and their method of calculations: 7. Public Expenditure on Education as Per cent of Total Government Expenditure 8. Public Expenditure on Education as Per cent of Gross National Product (GNP) 9. Public Expenditure on Primary/Secondary Education per Pupil as Per cent of GNP per Capita 10. Percentage of schools with improved drinking water sources 11. Percentage of schools with adequate sanitation facilities.	– Projector – Power Point Presentation
Tea Break for 15 Minutes		
1 Hour 15 Minutes	Group Work: The Participants undertake the group work on identifying the needed information for the calculations of above	– Projector – Flip Chart

	Quality Education indicators, the activity is facilitated by the trainer	– Notebook and Pen
Lunch & Prayer Break (12:00 – 01:00)		
1 Hour 30 Minutes	Quiz and Discussion: The Participants take a quiz related to the purpose and use of Quality Education indicators	– Projector – Power Point Presentation
1 Hour 30 Minutes	The Participants are Evaluated by Trainer through questions and answers from participants regarding different types of indicators and their use and importance in the analysis of educational data	– Projector – Flip Chart – Notebook and Pen

Goal 6: Quality Education

Improving all aspects of the quality of education, and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy, and essential life skills

Varied definitions of quality education reflect differences in the education standards that have been attained as well as objectives and purposes of education that are prioritized. Thus, they highlight those quantitative and qualitative dimensions of education that have been prioritized to enhance the process of learning. Differences between and within countries reveal, on the one hand, an insufficient number of schools without essential safety and environmental health safeguards as well as untrained and, often, unpaid teachers and, on the other hand, schooling that produces outcomes ranked high within internationally administered tests of learning accomplishments.

It is also important to acknowledge the false divide that often exists between quality and access, and the role that low quality has in turning children and their families away from schooling, and the incredible drawing power that quality schools have in the community. Increasingly, the Child Friendly School (CFS) framework has been used to more clearly identify the key dimensions of quality, which include inclusiveness, effectiveness, safe/protective/healthy, gender friendliness and involvement of community, parents and students.

The government obligation to define and ensure minimum quality standards throughout the country requires an assessment of the existing conditions, a definition of standards that should be in place everywhere and the process whereby these standards will be implemented and monitored. The human rights perspective enriches this subject-matter by broadening the usual focus on quantitative data to encompass **all** rights of **all** key actors in education.

Core EFA MDG Indicators

6	Core EFA MDG Indicators	Disaggregation	Data Source

6.1	**Survival Rate to Grade 6**	• Sex
		• Geographical region
		• Urban/Rural
		• Other social and economic disaggregation such as
		  • Ethnicity, caste
		  • Language
		  • Disabilities
			• Annual school census
			• Household surveys

6.2	**Percentage of Primary School Teachers having the Required Academic Qualifications**	• Sex
		• Geographical region
		• Urban/Rural
		• Public, private
		• Other social and economic disaggregation such as
		  ○ Ethnicity, caste
		  ○ Language
		  ○ Disabilities
			• Annual school census

6.3	**Percentage of School Teachers who are Certified to Teach According to National Standards for:**
	• **Early Childhood Care and Education**
	• **Primary Education**
	• **Secondary Education**
	• **Non-Formal Education**
		• Sex
		• Geographical region
		• Urban/Rural
		• Public, private
		• Other social and economic disaggregation such as
		  ○ Ethnicity, caste
		  ○ Language
		  ○ Disabilities
			• Annual school census

6.4	**Pupil-Teacher Ratio (PTR) for:** • **Primary Education**	• Geographical region • Urban/Rural	• Annual school census

6	Core EFA MDG Indicators	Disaggregation	Data Source
	• **Secondary Education**	• Public/private	
6.5	**Pupil-Class ratio (PCR) for:** • **Primary Education** • **Secondary Education**	• Geographical region • Urban/Rural • Public/private	• Annual school census
6.6	**Pupil-Textbook ratio (PBR) for:** • **Primary Education** • **Secondary Education**	• Geographical region • Urban/Rural Public/private	• Annual school census
6.7	**Public Expenditure on Education as Per cent of Total Government Expenditure**	National level indicator	• Government Budget reports
6.8	**Public Expenditure on Education as Per cent of Gross National Product (GNP)**	National level indicator	• Government Budget reports
6.9	**Public Expenditure on Primary/Secondary Education per Pupil as Per cent of GNP per Capita**	National level indicator	• Government Budget reports
6.10	**Percentage of schools with improved drinking water sources**	• Geographical region • Urban/Rural • Public/private	• Annual School census. • Project surveys and reports

6	Core EFA MDG Indicators	Disaggregation	Data Source
6.11	**Percentage of schools with adequate sanitation facilities.**	• Geographical region • Urban/Rural • Public/private	• Annual School census. • Project surveys and reports

6.1 Survival Rate to Grade 6

See details in EFA Goal 2 (UPE) section

6.2 Percentage of Primary School Teachers Having the Required Academic Qualifications

Definition and Purpose

The number of primary school teachers with at least the minimum academic qualifications required by the public authorities for teaching in primary education, expressed as a percentage of the total number of primary school teachers. This indicator measures the proportion of primary school teachers who meet the basic requirement in terms of academic qualifications as specified by the country's authorities. It indicates the general quality of a country's human capital involved in teaching in primary education. Teachers are persons who, in their professional capacity, guide and direct pupils' learning experiences in gaining the knowledge, attitudes and skills that are stipulated in a defined curriculum program.

Calculation Method and Data Required

Divide the number of primary school teachers having the minimum required academic qualifications by the total number of primary school teachers, and multiply by 100.

$$\text{\% Primary teacher having the required academic qualifications}_t = \frac{\text{Total number of primary teachers with required academic qualification in year t}}{\text{Total number of primary teachers year t}} \times 100$$

Possible Data Sources

Countries usually collect data on teachers through annual school censuses. Disaggregating teacher data by gender allows for the calculation of the percentage of female teachers. Data on teachers, especially for the public sector, can also be gathered from the departments in the Ministries that are responsible for keeping teacher's records and paying salaries.

Disaggregation

This indicator can be calculated by sex, geographical location (region, rural/urban), by type of institutions (public and private), and by teacher's age-groups.

Interpretation

A high percentage of teachers having the required academic qualifications denotes the availability of academically qualified teachers and the general quality of the teaching force. Teachers' academic qualifications, together with pre-service or in-service teacher training, correlate strongly and consistently with pupils' scholastic performance, which of course is also affected by other factors, such as the experience and status of teachers, teaching methods, teaching materials and the quality of classroom conditions. It should be noted that some teachers without the required academic qualifications may acquire equivalent competence in the subject matter through professional experience and self-instruction.

Limitations and Constraints

National standards regarding the minimum academic qualifications required of a primary school teacher should be strictly applied in identifying the number of academically qualified teachers. The percentage of teachers having the required academic qualifications cannot exceed 100 per cent. This indicator should be calculated separately for public, private and other primary schools. Care should be exercised to take into account all teaching staff.

6.3 Percentage of School Teachers who are Certified to Teach According to National Standards for:

- Early childhood
- Primary Education
- Secondary Education
- Non-Formal Education

Definition and Purpose

The number of school teachers who are certified to have received the minimum organized teacher-training (pre-service or in-service) required for teaching at a certain level of education, expressed as a percentage of the total number of school teachers at that level. This indicator measures the proportion of school teachers trained in pedagogical skills, according to national standards, to effectively teach and use the available instructional materials. It also reveals a country's commitment to invest in the development of its human capital involved in teaching activities.

Calculation Method and Data Required

Divide the number of school teachers who are certified to have received the minimum required teacher-training by the total number of school teachers at that level, and multiply by 100.

Percentage of early childhood educators- care-givers who are certified to teach according to national standards in year $_t$

$$= \frac{\text{Total number of early childhood educators- care-givers who are certified to teach according to national standards in year t}}{\text{Total number of early childhood educators- care-givers in year t}} \times 100$$

Percentage of primary school teachers who are certified to teach according to national standards in year $_t$

$$= \frac{\text{Total number of primary teachers who are certified to teach according to national standards in year t}}{\text{Total number of primary teachers in year t}} \times 100$$

Percentage of secondary school teachers who are certified to teach according to national standards in year $_t$

$$= \frac{\text{Total number of secondary teachers who are certified to teach according to national standards in year t}}{\text{Total number of secondary teachers in year t}} \times 100$$

Percentage of nonformal facilitators/instructors who are certified to teach according to national standards in year $_t$

$$= \frac{\text{Total number of non-formal facilitators/instructors who are certified to teach according to national standards in year t}}{\text{Total number of non-formal facilitators/instructors in year t}} \times 100$$

Possible Data Sources

Countries usually collect data on teachers through annual school censuses. Disaggregating teacher data by gender allows for the calculation of the percentage of female teachers. Data on teachers, especially for the public sector, can also be gathered from the departments in the Ministries that are responsible for keeping teacher's records and paying salaries.

Disaggregation

This indicator can be calculated by sex, geographical location (region, rural/urban), by type of institutions (public and private), by teacher's age-groups, and by teacher's qualifications.

Interpretation

A high percentage of teachers certified to teach in primary schools imply that a majority of the teaching force is trained and has the necessary pedagogical skills to teach and use the available instructional materials in an effective manner. This indicator does not take into account differences in teachers' experiences and status, teaching methods, teaching materials and variations in classroom conditions – factors that also affect the quality of teaching/learning. It should be noted that some teachers without this certification may have acquired equivalent pedagogical skills through professional experience.

Limitations and Constraints

Data should refer to teachers certified as having received adequate pre-service or in-service teacher training, or both. The percentage of certified teachers cannot exceed 100 per cent. This indicator should be calculated separately for public, private and all other schools (UNESCO 1998).

6.4 Pupil-Teacher Ratio (PTR)

Definition and Purpose

Pupil-teacher ratio (PTR) is one of the most common indicators used in educational planning. A low number of pupils per teacher indicate pupils will have a better chance of contact with the teachers and hence a better teaching-learning process. This ratio is also used to measure the level of human resource input (teachers). Many planners also use this ratio for projecting the number of teachers required.

Method of Calculation

Divide the total number of pupils enrolled in a specific education level by the number of teachers at the same level.

Pupil-teacher ratio (PTR) for primary education

$$PTR_{Pri,\,t} = \frac{\text{Total number of pupils in primary education in school-year t}}{\text{Total number of teachers in primary education in school-year t}} \times 100$$

Pupil-teacher ratio (PTR) for secondary education

$$PTR_{Sec,\,t} = \frac{\text{Total number of pupils in secondary education in school-year t}}{\text{Total number of teachers in secondary education in school-year t}} \times 100$$

Possible Data Sources

The data on both enrolment and teachers should cover both public and private institutions and programs. Data for public programs should be available from the school survey. Household surveys or other private records may provide the necessary data for programs run by the community or NGOs and private schools. In some cases, countries may have compiled the data from both public and private programs.

Disaggregation

Pupils-teacher ratio could be disaggregated by region, urban/rural, and by institution (such as public, private, NGO-supported, community-supported).

Interpretation

The PTR should normally be compared to established national norms on the number of pupils per teacher for each level or type of education. A high pupil-teacher ratio suggests that each teacher has to deal with a large number of pupils and that, conversely, pupils receive less attention from the teacher. It is generally assumed that a low pupil-teacher ratio signifies smaller classes, which enable the teacher to pay more attention to individual pupils and thus contribute to the better scholastic performance of the pupils. This indicator does not take into account differences in teachers' academic qualifications, pedagogical training, professional experience and status, teaching methods, teaching materials and variations in classroom conditions – all factors that could also affect the quality of teaching/learning and pupil performance.

Limitations and Constraints

This indicator should be calculated separately for public, private and all other schools. In calculating and interpreting this indicator, one should take into account the existence of part-time teaching, school-shifts, multi-grade classes and other practices that may affect the precision and meaningfulness of pupil-teacher ratios. For instance, the number of part-time teachers should be converted to a number of 'equivalent full-time teachers'. Care should be exercised to include all staff involved in teaching.

6.5 Pupils-Class Ratio (PCR)

Definition and Purpose

The average number of pupils per class is an important indicator which gives a rough indication of class size. It is used to assess the efficiency of resource utilization. It is also used, indirectly, to assess the teaching/learning process.

Method of Calculation

Divide the total number of pupils enrolled in a specific education level by the number of Classes* at the same level.

Pupil-Class Ratio (PCR) for Primary Education

$$PCR_{Pri,\,t} = \frac{\text{Total number of pupils in primary education in school-year t}}{\text{Total number of Classes in primary education in school-year t}} \times 100$$

Pupil-Class Ratio (PTR) for Secondary Education

$$PCR_{Sec,\,t} = \frac{\text{Total number of pupils in secondary education in school-year t}}{\text{Total number of Classes in secondary education in school-year t}} \times 100$$

Possible Data Sources

Like data for pupil-teacher ratio, data can be gathered from the annual school census. However, annual school censuses may not include data from private and other institutions. Additional data collections from those institutions would be required.

Disaggregation

Pupils-Class Ratio could be disaggregated by region, urban/rural, and by institution (such as public, private, NGO-supported, community-supported).

Interpretation

The PCR should normally be compared to established national norms on the number of pupils per Class for each level or type of education. A high pupil-class ratio suggests that each Class has to deal with a large number of pupils and that,

- Cause degrading teacher ability to handle the class
- Physical and mental uneasiness of pupils in crowded classes
- Both affect the quality of teaching-learning.

Limitations and Constraints

This indicator should be calculated separately for public, private and all other schools. It should not confuse it with number of classrooms in the schools. The number of classes would be sometimes more than number of classrooms.

6.6 Pupil-Textbook Ratio (PBR) for:

- **Primary Education**
- **Secondary Education**

Definition and Purpose

The average number of textbooks per pupil is an important indicator which gives a rough indication of allocation of resources/materials to learners. It is used to assess the efficiency of resource utilization.

Method of Calculation

Divide the total number of textbooks allocated to the specific education level by the total of pupils enrolled at the same level.

Pupil-Textbook Ratio (PBR) for Primary Education

$$PBR_{Pri,\,t} = \frac{\text{Total number of textbooks distributed to primary education pupils in school-year t}}{\text{Total number of pupils in primary education in school-year t}} \times 100$$

Pupil-Textbook Ratio (PBR) for Secondary Education

$$PBR_{Sec,\,t} = \frac{\text{Total number of textbooks distribute to secondary education students in school-year t}}{\text{Total number of pupils in secondary education in school-year t}} \times 100$$

* A group of pupils in one instructional class. Hence, a section is equal to a class. One classroom can be used for a number of sections.

Possible Data Sources

Like data for pupil-teacher ratio, data can be gathered from the annual school census. However, annual school censuses may not include data from private and other institutions. Additional data collections from those institutions would be required.

Disaggregation

Pupils-Textbook Ratio could be disaggregated by region, urban/rural, by institution, and by subject (such as public, private, NGO-supported, community-supported).

Interpretation

The PBR should normally be compared to established national norms on the number of books per pupil for each level or type of education. A high pupil-book ratio suggests that each student is equipped with more materials and resources to support the learning process.

Limitations and Constraints

This indicator should be calculated separately for public, private and all other schools. Although it is used as a proxy indicator for quality, it cannot provide information on the teaching-learning process. At the secondary level, this indicator should be calculated separately for general education and technical-vocational education.

6.7 Public Expenditure on Education as Percentage of Total Government Expenditure

Definition and Purpose

Total public expenditure on education (recurrent and capital) expressed as a percentage of total government expenditure in a given financial year.

- Allows an assessment of the government's policy emphasis on education relative to the perceived value of other public investments.
- Reflects also the commitment of a government to invest in human capital development.

UNESCO recommends that countries allot at least 6 per cent of the gross national product equivalent to public education spending.

Method of Calculation and Data Required

Divide total public expenditure on education incurred by all government agencies/departments in a given financial year by the total government expenditure for the same financial year and multiply by 100.

$$\text{Public Expenditure on Education as Per Cent of Total Government Expenditure}_t = \frac{\text{Total public expenditure on education in a financial year t}}{\text{Total government expenditure in a financial year t}} \times 100$$

Data can be derived from annual financial reports prepared by the Ministry of Finance, national accounts reports from the Government Statistical Office, and financial reports from the various government departments engaged in education activities, especially the Ministry of Education.

Disaggregation

Data for this indicator will most likely be available at the national level only. However, in some countries, this indicator can be disaggregated by level of administration, by geographical location, and by purpose of expenditure (emoluments, teaching material, etc.).

Interpretation

A higher percentage of government expenditure on education shows a high government policy priority for education relative to the perceived value of other public investments, including defence and security, health care, social security for unemployment and elderly, and other social or economic sectors.

Limitations and Constraints

Total public expenditure on education should include those incurred by all concerned ministries and levels of administration. The fact that the fiscal year and educational year budget periods may be different should also be taken into consideration.

In some instances, data on total public expenditure on education refers only to the Ministry of Education, excluding other ministries that spend a part of their budget on educational activities.

6.8 Public Expenditure on Education as a Percentage of Gross National Product (GNP)

Definition and Purpose

Total public expenditure on education (current and capital) expressed as a percentage of the Gross

National Product (GNP) in a given financial year. It shows the share of the value of the total national production of goods and services in a given year that has been devoted to education.

Calculation Method and Data Required:

Divide public current expenditure on primary education in a given year by the GNP for the same year and multiply by 100.

$$\text{Public Expenditure on Education as a Per cent of GNP}_t = \frac{\text{Total public expenditure on education in a financial year t}}{\text{Gross National Product in financial year t}} \times 100$$

Possible Data Sources

Data can be collected and collated from the annual financial reports by the central or federal governments, and state or provincial or regional administrations. Data on GNP are normally available from National Accounts reports prepared by concerned agencies in the government.

Disaggregation

This indicator is normally calculated at the national level only.

Interpretation

In principle, a high percentage of GNP devoted to public expenditure on education denotes a high level of attention given to investment in education by the government; and vice versa.

Limitations and Constraints

Total public expenditure on education should include those incurred by all concerned ministries and levels of administration. Total public expenditure on education refers to all expenditure on education by the central or federal government, state governments, provincial or regional administrations and expenditure by municipal and other local authorities. Central government includes ministerial departments, agencies and autonomous institutions which have education responsibilities. The statistics on expenditure should cover transactions made by all departments or services with education responsibility at all decision-making levels.

In some instances, data on total public expenditure on education refers only to the Ministry of Education, excluding other ministries that spend a part of their budget on educational activities.

6.9 Public Current Expenditure per Pupil as Percentage of GNP per Capita (Primary and Secondary)

Definition and Purpose

Public current expenditure per pupil at each level of education, expressed as a percentage of GNP per capita in a given financial year. This indicator measures the share of per capita income that has been spent on each pupil or student. It helps in assessing a country's level of investment in human capital development. When calculated by level of education, it also indicates the relative costs and emphasis placed by the country on a particular level of education.

Calculation Method and Data Required

Divide per pupil public current expenditure on each level of education in a given year by the GNP per capita for the same year and multiply by 100.

$$A = \frac{\text{Public current expenditure on primary education in financial year t}}{\text{Total enrolment in primary education level h in school-year t}}$$

$$B = \frac{\text{Public current expenditure on secondary education in financial year t}}{\text{Total enrolment in secondary education level h in school-year t}}$$

$$C = \frac{\text{Gross National Product in financial year t}}{\text{Total national population in year t}}$$

Public Current Expenditure per Pupil (student) as per cent of GNP per Capita (for primary level) at year t

$$= \frac{A}{C} \times 100$$

Public Current Expenditure per Pupil (student) as Per cent of GNP per Capita (for Secondary level) at year t

$$= \frac{B}{C} \times 100$$

Possible Data Sources

Data can be collected and collated from annual financial reports prepared by the Ministry of Finance, National Accounts reports prepared by concerned agencies in government, and financial reports from various government departments engaged in educational activities, especially the Ministry of Education. Data on enrolment and the population can be derived from school registers, school surveys or censuses and population censuses.

Disaggregation

This indicator can be disaggregated by level of education.

Interpretation

A high percentage for this indicator denotes a high share of per capita income being spent on each pupil (student) in a specified level of education (either **primary** or **secondary**). It represents a measure of the financial cost per pupil (student) in relation to average per capita income.

Limitations and Constraints

Public expenditure per pupil as percentage of GNP per capita can exceed 100 per cent. This indicator should be based on consistent data on public expenditure that covers all subsidies to both public and private educational institutions. The use of this indicator must take into account the degree of coverage represented by the educational expenditure figure and the ability of the GNP estimate to represent the level of national economic capacity accurately.

This indicator may be distorted by inaccurate estimation of GNP, current population or enrolment by level of education. The fact that fiscal year and educational year budget periods may be different should also be taken into consideration.

6.10 Percentage of schools with improved water sources

Definition and Purpose

While data on this indicator is dependent upon current fields and definitions within EMIS, “improved” water sources as defined by the WHO Joint Monitoring Program for Water Supply and Sanitation (www.wssinfo.org) in line with MDG reporting, include the following: piped, public taps and standpipe, tube wells and boreholes, protected dug wells, protected springs and rainwater collection. Without access to water, it is extremely unlikely that sanitation facilities can possibly function for students.

In using EMIS data sets, one has no choice but to accept the categories and definitions in existence, and where these are different than those here, or if improved sources are not distinguished from unimproved, this should be mentioned in the response.

Calculation Method and Data Required

$$= \frac{\text{Number of Schools (primary and/or secondary) with Improved water sources}}{\text{Total number of schools (primary and/or secondary)}} \times 100$$

Possible Data Sources

Data can be collected from EMIS data sets, special school surveys and school facilities data sets.

Disaggregation

This indicator can be disaggregated by geographic area, by private/public sector, by primary/secondary.

Interpretation

Without access to water, it is extremely unlikely that sanitation facilities and toilets can function properly, if at all. There are some professionals who would say that without the provision of water and toilets, school buildings are simply learning sheds.

Limitations and Constraints

This indicator does not necessarily indicate use of facilities or whether they are locked and restricted to teachers and staff, or whether they are so dirty and unhygienic that they are not used. Lack of awareness or cultural experience using toilets can be overcome over time, especially with quality sanitation and hygiene education classroom activities and support. However, the mere presence of facilities must not be equated with actual use.

6.11 Percentage of schools with improved sanitation facilities

Definition and Purpose

To ensure the provision of improved sanitation facilities, schools must rely on a wide range of technologies and networks. While data on this indicator is dependent upon current fields and definitions within EMIS, in line with MDG Reporting, 'improved' sanitation facilities are defined as the following: flush/pour flush to piped sewer, septic tank or pit latrine; ventilation improved latrine; pit latrine with slab and composting toilet (www.wssinfo.org).

In using existing EMIS data sets, however, one has no choice but to accept the categories and definitions in existence, and where these are different than those here, or if 'improved' sources are not distinguished from unimproved, this should be mentioned in the response.

Calculation Method and Data Required

$$\frac{\text{Number of Schools (primary and/or secondary) with Improved toilet facilities}}{\text{Total number of schools (primary and/or secondary)}} \times 100$$

Possible Data Sources

Data can be collected from EMIS data sets and from School Facilities date sets if they are not kept together. In addition, donor funded school construction and rehabilitation projects usually have excellent surveys and projections for school facilities, even if for only targeted areas, but which can be used for reference and interpretation in the report.

Disaggregation

This indicator can be disaggregated by geographic area, by private/public sector, by primary/secondary. If possible, disaggregation by male vs. female access can provide very provocative insights.

Interpretation

It is important that the data presented for this indicator is properly and clearly defined. In some countries, ‘adequate’ is a standard which requires toilets to have water and to be in regular use, while in other countries, there is no distinction between adequate and exists, so that broken or out of use facilities are included in the calculations. This should be made clear in the report.

Limitations and Constraints

The indicator does not necessarily indicate use of facilities or whether they are locked and restricted to teachers and staff, or whether they are dirty and unhygienic. Lack of awareness or cultural experience using toilets can be overcome over time, especially with quality sanitation and hygiene education, classroom activities and support. It cannot be assumed, however, that the mere presence of facilities can by any means be equated with actual use.