How to read the country sheets?

The country file is a compilation of indicators in education enabling both a concise and a holistic view of the situation of education in the country it presents. The indicators are chosen according to their relevance in respect of the appreciation of the status of the educational systems (contextual and financial constraints, parameters of education politics, result), and according to the availability of reliable statistics, which inform them. The country file contains three pages. The first page, named « country profile », shows the main indicators in Education. The second page (general pyramid) brings together pyramids that show the schooling participation indicators for the most recent year for which data is available and for the year closest to 2000 for which data is available. The third page (pyramid of inequities) shows, also through pyramids, school participation indicators first according to gender, secondly according to the quintile of living conditions. For the last breakdown, only the peaks (first and fifth quintile) are presented.

The country profiles

The country profile gives a summary of the status of educational systems, giving the value of the most important indicators and comparing these values to the average and the peaks (minimum and maximum) observed in Sub Saharan Africa. The profiles contain i) **the indicators relative to the main objectives of the EFA** ii) **the indicators relative to the demographic and economic context** iii) **the financial indicators calculated for the educational sector as a whole.**

The school indicators are obtained mainly from country status reports (CSR) or from calculations based on data from the UIS. The demographic data used are either the most recent estimation of the UN Population Division (2012 revision) or the national data corrected during CSR practices. The financial indicators come from several sources: World Bank, International Monetary Funds, sector analysis, or other missions in the countries. However there is not always consistency in the date of the data for the different countries. Therefore the choice has been made to use for each indicator the figure for the most recent year (which can be a different year from the one given for the schooling indicators and the financial indicators). This might seem like a limitation, but it is only a minor inconvenience as the changes in indicators from one year to another are relatively small. Below is a list of indicators presented in the profiles; for each indicator you'll find its interpretation.

The indicators relative to EFA objectives:

A recent and comparable assessment between the countries is available for only four of the six EFA objectives (objectives 1, 2, 4 and 5)

Primary Completion Rate: Ratio of new entrants (non-repeaters) in the last grade of the primary cycle to the number of children with the official age for the last grade, expressed in percentage. For example, for the countries where the primary cycle is 6 years long, this indicator is the Gross Intake Rate to the 6th grade, and is calculated as follows:

$$\text{Primary Completion Rate} = \frac{\text{New entrants to the last grade}}{\text{Population of the last grade official age}} \; x\,100$$

Boy-girl parity index: Ratio between the Gross Enrolment Rate for girls (GER girls) and the Gross Enrolment Rate for boys (GER boys) in the primary cycle, with the lesser GER as numerator.

$$\text{Parity Index} = \frac{\text{Minimum (GERgirls, GER boys)}}{\text{Maximum (GER girls, GER boys)}}$$

The index varies between 0 (a situation of perfect inequality: only one sex-group attends school) and 1 (a situation of perfect parity: the proportion of girls attending school is equal to the proportion of boys attending school).

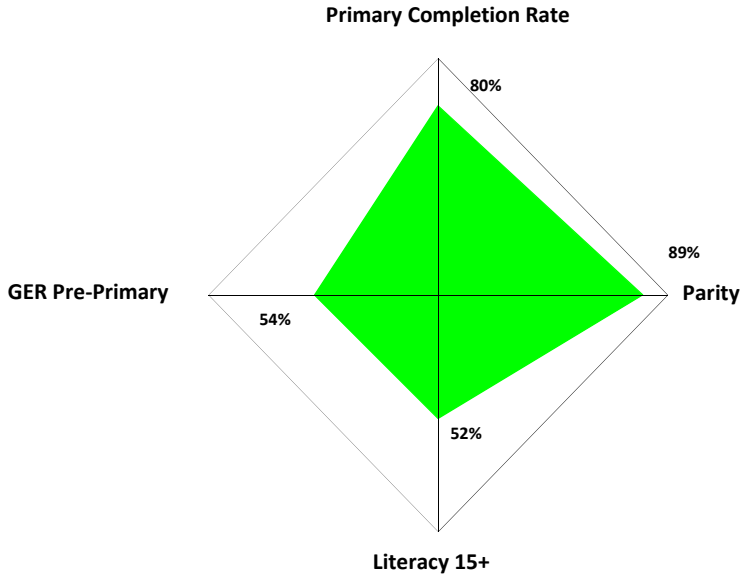
Adults 15+ Literacy Rate: Proportion of people able to read and write, in whatever language, among the population aged 15 and over.

Pre-Primary Gross Enrolment Rate (GER Pre-Primary): Number of students in pre-primary classes expressed in percentage of the population with the official pre-primary age group. It is calculated as follows:

$$\text{GER Pre-Primary} = \frac{\text{Enrolment in pre-primary cycle}}{\text{Population of official pre-primary age group}}$$

EFA Diamond

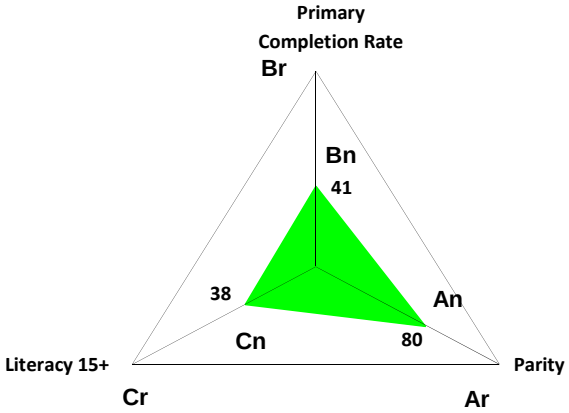
The EFA Diamond shows, in one diagram, the position of a country in relation to the aforementioned four EFA objectives. Its size is a visual representation of the actual situation and the effort put forth to reach these objectives



EFA Africa Development Index (EFA/ADI)

The EFA/ADI summarises, in one figure, the status of the country in relation to the following EFA three objectives: the Universal Primary Education, the boy/girl parity and the literacy for the fifteen years old and over. The three indicators represented in a three-axis diagram make up the EFA triangle. The EFA/ADI is the ratio of the area of the triangle to the area of the triangle obtained when the three indicators take the value of 100%.

Box 1: Calculation of the EFA Africa Development Index



Call it A_r (parity), B_r (rate of completion in the primary level) C_r (literacy for the 15 years old and over) the peaks of the benchmark equilateral triangle and A_n, B_n et C_n the peaks of the national triangle. If we consider the centre of the triangle as a orthonormal point it's possible to determine the coordinates of the points and to deduct the surface areas of the two triangles:

$A_r(100\frac{\sqrt{3}}{2}$; -50), $B_r(0$; 100), $C_r(-100\frac{\sqrt{3}}{2}$; -50)

$A_n(a\frac{\sqrt{3}}{2}$; -a/2), $B_n(0$;b), $C_n(-c\frac{\sqrt{3}}{2}$; -c/2)

a = Boy-girl parity index
b = primary completion rate
c = literacy rate for adults 15+

The length of a side of the benchmark equilateral triangle is equal to 100 $\sqrt{3}$. The measurements for the national triangle are given as such:

$$\sim_n = \sqrt{a^2+ab+b^2}, \quad {}_n = \sqrt{b^2+bc+c^2}, \quad a_n = \sqrt{c^2+ca+a^2}$$

The area of any given triangle is calculated as such:

$$S\ Z\ EPòEPJ\sim FòEPJ\ \ FòEPJ\ a\ FF1/2$$

P being the half -perimeter and α, β and λ, the lengths of the three sides.

Call it S_r and S_n the areas of, respectively, the benchmark triangle and the national triangle. The EFA Africa Development Index is :

$$ADI = {}^{S_n}/_{S_r}$$

S_r has a constant value in time, independent from national indicators and equal to 7500 $\sqrt{3}$ =12990.

In our example,

$$\sim_n = \sqrt{80^2 + 80x41 + 41^2} = 106,6 \qquad _n = \sqrt{41^2 + 41x38 + 38^2} = 68,4$$

and $\mathrm{a}_n = \sqrt{38^2 + 38x80 + 80^2} = 104,3$

The half-perimeter $P = \left(\sim n + \ _n + \mathrm{a}\ n\right)\Big/2 = (106,6 + 68,4 + 104,3)/2 = 139,7$

We therefore get $S_n = \left(139,7\left(139,7 - 106,6\right)\left(139,7 - 68,4\right)\left(139,7 - 104,3\right)\right)^{1/2} = 3411$

EFA Africa Development Index = 100 x 3411 / 1290 = 26,3

In their formulation, the adults 15+ literacy rate and the gender parity index cannot exceed 100%, in contrast to the PCR which can exceed the value of 100%. In practice when the PCR exceeds 100%, its value is replaced by 100 in the calculation of the EFA/ADI.

Demographic and macro-economic context indicators

Gross domestic product (GDP) per inhabitant: Gross domestic product divided by the total population, expressed in U.S dollars.

Percentage of the school age population (primary school): Proportion of the population with the theoretic age for attending the primary cycle.

Prevalence of HIV/Aids (15-49 year olds): Proportion of the population aged 15 to 49 living with HIV/Aids.

HDI ranking: Rank of the country according to the Human Development Index.

Result and educational policy indicators

Schooling profile: Graphic representation of the access rates by grade. In the country file, only the initial year and final year for each academic level are presented. The different grades are presented horizontally and the access rates vertically. The access rate for a given grade is the ratio between the new entrants in that grade (non-repeaters) and the population with the theoretical age to attend the so-mentioned grade. The first point of each academic level is known as the admission rate to that academic level and the last point is known as the completion rate for the considered academic level.

Education policy parameters:

Pupil Teacher Ratio (PTR) in public schools: The ratio between the number of pupils enrolled at a specific level in public schools and the number of teachers in public schools. This ratio calculated for each school level represents the average number of pupils per teacher in government schools.

Public Teachers' Average Salary as units of GDP/Capita : For a given school level, it's the ratio between the average salary of teachers posted in public schools (ratio between teachers payroll and total number of teachers in the public schools) and the GDP per capita.

Percentage of current spending, other than teachers' salaries: For a given school level, the ratio between the current spending, excluding teachers' salaries, and the total current spending of the mentioned school level.

Percentage of repeaters: For a given school level, the ratio between the number of repeaters and the number of pupils enrolled in that same school level.

Percentage of students in the private sector: The ratio between the number of pupils enrolled in private educational institutions in a given level of education and the total enrolment (private and public), expressed in percentage.

Sectoral financial indicators (on left hand side of the page)

Mobilization of domestic resources

Domestic public resources as percentage of GDP : Ratio between the total state income (excluding aids) and the Gross Domestic Product expressed in percentage.

Education current expenditure as percentage of government total current expenditure: Ratio between the total current spending for education and the total current spending.

Education budget distribution

Distribution of education budget: For a given school level, the ratio between current public spending for that level and the total public current spending for education

Public cost per student as percentage of the GDP per capita: Public current yearly expenses of a cycle to the number of students attending school in the public sector of that same cycle, expressed in percentage of GDP per capita.

The Educational Pyramids

The Educational Pyramids show for each country the access and the attendance for each school cycle and the flow of students transiting from one cycle to another. Generally, the indicators have been calculated either with information available in the education country status report (CSR) or with raw data from the UNESCO Institute of Statistics (UIS). The indicators in the educational pyramids are described below.

A school cycle is represented by a trapezoid, the large base represents the intake rate, and the small base represents the completion rate. The length of the base is proportional to the value of the indicator it represents. When the value of an indicator exceeds 100%, it is represented by a line which length is proportionate to 100% (maximum length).

The transition between the different school years is represented by arrows, their size being proportionate to the value of the rate of corresponding transversal transition rates.

The Gross Intake Rate in the first grade and the Gross Intake Rate in the last grade (for each academic cycle)

These rates are obtained by considering the ratio of the non-repeaters in the first and last grades of each cycle to the population with the adequate age of these grades. The Gross Intake Rate in the last grade for a cycle is also known as Completion Rate of that cycle. For example, for the lower secondary cycle, which lasts four years, and with an access age of 12 years old, it is given as follows:

$$\text{Gross Intake Rate in the 1st Grade of Lower Secondary} = \frac{\text{Non-repeaters in 1st Grade of Lower Secondary}}{\text{Population aged 12}}$$

$$\text{Completion Rate of Lower Secondary} = \frac{\text{Non-repeaters in last Grade of Lower Secondary}}{\text{Population aged 15}}$$

Transversal Transition Rate

In the pyramids, this rate is calculated in a transversal way: ratio between the Gross Intake Rate in the first grade of a cycle and the completion rate of the previous cycle. For example, for the measurement of the transition between the primary cycle and the lower secondary cycle in 2010, it is:

$$\text{Transversal Transition Rate} = \frac{\text{Acces Rate to the 1st Grade of Lower Secondary}_{2010}}{\text{Primary Completion Rate}_{2010}}$$

This indicator is an approximation of the effective transition rate, calculated for the same year as the ratio between the new entrants (non-repeaters) to the 1st grade of the lower secondary cycle and the new entrants (non-repeaters) to the last grade of the primary cycle of the previous year.

Gross Enrolment Rate (GER) by cycle

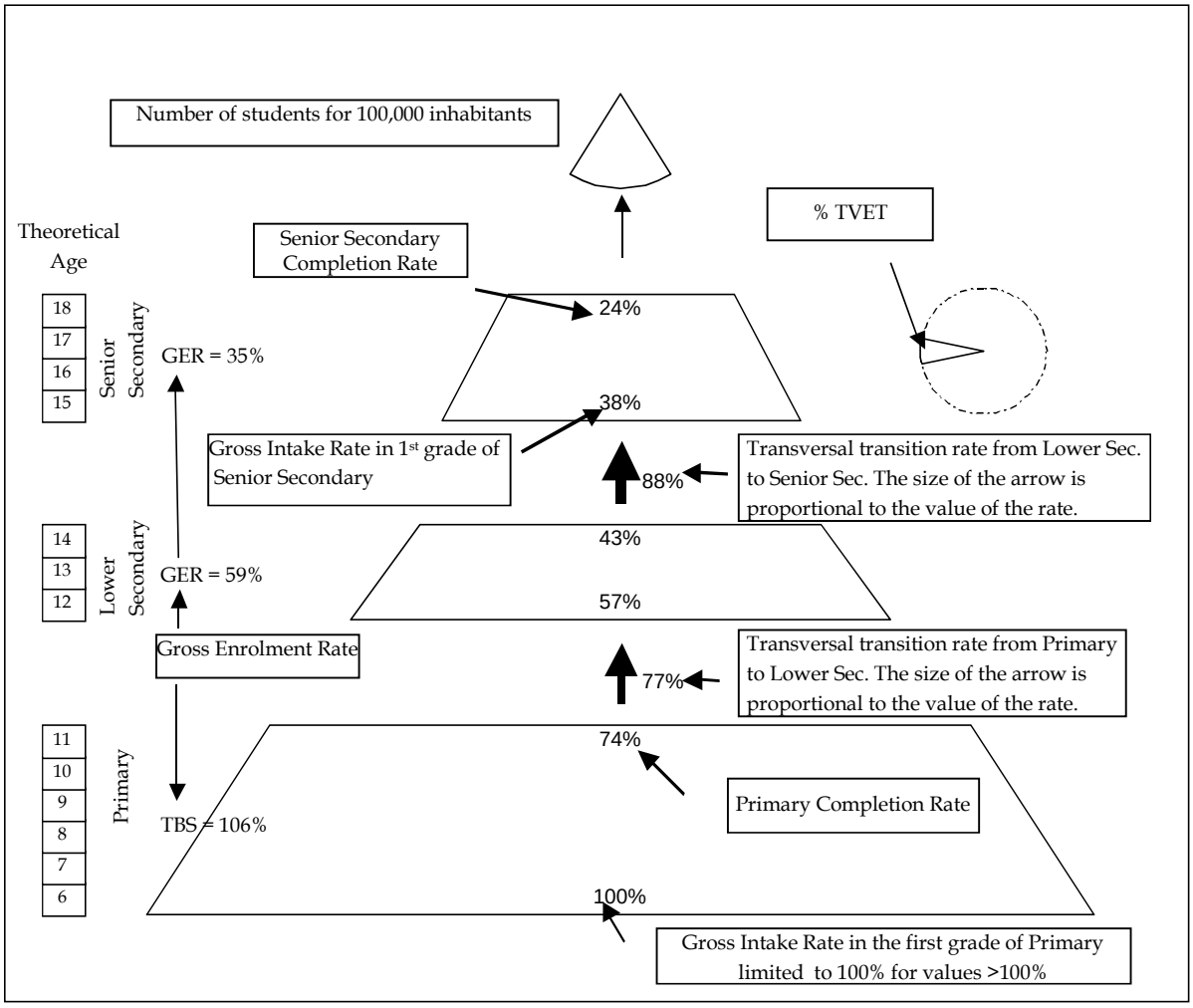
This is the enrolment in the cycle, expressed as percentage of the school-age population of that cycle. For the primary cycle, for example, it is calculated as such:

$$\text{Gross Enrolment Rate} = \frac{\text{Enrolment in Primary Cycle}}{\text{Primary Cycle School-Age Population}}$$

Percentage of TVET:

It is number of students enrolled in TVET institutions expressed as a percentage of the number of students in secondary cycle (General and TVET).

How to read the country pyramids



The inequity pyramids are built the same way with exception of:

i) A level of education is represented by the adjunction of two rectangular trapezoids. The trapezoids on the left hand side show the indicators for boys in the "gender" pyramid and for the children from the richest quintile households in the "quintile of living conditions" pyramid. The trapezoids on the right hand side show the indicators for girls and for children from the poorest quintile. When there is no inequity in gender (in accordance to the level of wealth) the "gender" pyramid (and respectively the "quintile of living conditions" pyramid) shows a symmetrical axis. It is asymmetrical when there is a disparity in gender. The more disparity there is, the more asymmetrical the axis will be.

ii) In regards to the "quintile of living conditions" pyramid, the probability of access is used rather than the gross access rate. The probability of access to a grade can be estimated as the proportion of individuals of a cohort who will access (one day or another) this level of study. It can't exceed 100%.