



UNHCR Education Standards and Indicators Handbook 2006

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1. Introduction

Many questions are often asked when calculating education statistics for Standard and Indicator Reports, such as ‘When do I include the local population? Why are enrolment percentages reaching over 100 per cent? Is gender parity the same as the percentage of girls enrolled in school?’

This handbook has been developed because education indicators can be both difficult and confusing to calculate, especially when working in locations with large population movements. This handbook aims to bring clarity on the calculation of these indicators, by defining key terms, giving concrete examples of calculations using fractions, and discussing the rationale behind accurate and systematic education data collection.

2. Standards and Indicators and Other Key Terms¹

Standards and Indicators are often spoken of in relation to one another, but also they need to be understood on their own in order to be useful. **Indicators** are the quantitative or qualitative parameters (or measures) that determine, over time, performance of functions, processes, and outcomes. In other words, indicators are measures of progress: they are measurable values that

¹ The definitions used in this section are derived from the UNHCR Operational Data Management Learning Programme.

will influence what action UNHCR and its partners take in order to improve the living situations of refugees and other persons of concern. In order for an indicator to be useful, it must be calculated in the same way every time. This is important so that statistics are comparable across different places and in the same place over different times.

The reason for pairing standards with indicators is that while an indicator is the measurement itself, a **standard** defines the point for that particular measurement which must be reached or maintained. Standards are useful because they provide an indication of where programming is falling short of reaching operational goals and they quantify this shortfall. The difference between the standard and the indicator measured in your operation is called a “gap.” For example, if the standard for primary enrolment is set at 100 per cent, but the indicator measures enrolment at only 70 per cent, there is a gap of 30 per cent. Sometimes due to cultural, geographic or other circumstances, it may not be possible for your area to achieve all of the standards. If this is the case, this should be noted in the ‘comments column’ of the Standards and Indicators Report.

There are also two other useful terms worth clarifying for the purposes of calculating indicators which require the use of fractions. These terms are the denominator and the numerator.

The **denominator** is the total (such as the ‘total number of refugee children aged 6-11’) that is at the bottom half of the fraction. You require a denominator to calculate percentages in which you must divide the numerator by the denominator.

The **numerator** is the subset of a total at the top half of the fraction, such as the number of refugee girls enrolled in primary school. You must divide the numerator by the denominator to calculate percentages.

Percentages and rates are particularly useful in calculating indicators, as opposed to absolute values, which are the numbers that have not been divided by a total and are not part of a fraction. For example, an absolute value is “349 children are attending grade 1.” In contrast, an example of a rate is “78 per cent of school-aged children are attending grade 1.” The rate shows you not only how many children are in school, but more significantly, how many children **are not** in school, which is an important factor in programming. The absolute value of 349, on the other hand, only tells you how many children are in school, which makes programming decisions more difficult because it does not identify enrolment gaps.

As well, rates are very important when the camp population is fluctuating; either increasing due to an influx or decreasing due to repatriation or resettlement. For example, if one month 349 students attend in grade 1

and then next month only 302 students are in grade 1, you might assume that there is a high drop-out rate, which is usually a negative sign and suggests that something is wrong (for example, child labour, forced military recruitment, childhood illness, or poor education programming). However, if the camp population has drastically decreased in that month due to repatriation, you might find that the attendance rate of 78% is unchanged.

3. Calculating Education Indicators

The education indicators can be difficult to calculate for a number of reasons. For certain indicators, such as the student to teacher ratio, you are required to include the local and over-aged children with the refugee children. For other indicators, such as enrolment percentages, you are required to include just the school-aged refugee children. An additional challenge is that you are required to generate data on certain age groups which, depending on your operation, can be difficult to obtain (i.e. 15-24 year olds).

If your operation uses proGres, you should be able to obtain the number of refugees in any given age group. If you do not currently have access to proGres data, it can be obtained by contacting the registration focal point in your operation. A good idea, especially when asked to report on indicators such as the ‘percentage of 15-24 year olds enrolled in training,’ is to create a filter in proGres.

Given that you will have to report on this indicator year after year and monitor for changes, you can create a filter which will automatically reflect the individuals that meet the specified criteria. In other words, by saving certain search criteria as a filter, you do not need to re-enter the same search criteria the next time you want to perform the same search. When an individual no longer meets the set criteria, they will be excluded by the filter and when other individuals meet the criteria, they will be included in the filtered data set.

For this particular indicator, it is recommended that your operation requests lists from implementing partners of individuals who have participated vocational training and other learning programmes. This data should then be entered into proGres.

3.1 Enrolment Rates

The primary operational purpose of enrolment rates is to determine how many children are not in school.
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In order to calculate the percentage of refugee children enrolled in grades 1-6 (primary school), you will need to divide the numerator, the number of female and male refugees enrolled in grades 1-6 aged 6-11, by the denominator, the total population of female and male refugees between the ages of 6-11.

Because your data is likely disaggregated by gender, to get the overall enrolment, the number of refugee girls aged 6-11 enrolled in grades 1-6, and the number of refugee boys aged 6-11 enrolled in grades 1-6 needs to be added together to get the numerator. For example, if there are 85 girls in grades 1-6 and 92 boys in grades 1-6, and overall there are 106 girls aged 6-11 and 103 boys aged 6-11, your calculation would look like this:

$$\frac{(85+92)}{(106 + 103)} = \frac{177}{209} \times 100 = 84.68, \text{ or } \mathbf{85\%} \text{ of refugees aged 6-11 are enrolled in grades 1-6}$$

To calculate girls' enrolment separately, you divide the numerator, 85 female refugees aged 6-11 enrolled in primary school by the denominator, 106 female refugees who are between the ages of 6-11. Your calculation would look like this:

$$\frac{85}{106} \times 100 = \mathbf{80\%} \text{ of girls are enrolled in primary school}$$

The process is the same for calculating boys' enrolment. You divide the numerator, 92 boys aged 6-11 enrolled in primary school by the denominator, 103 boys aged of 6-11. Your calculation would look like this:

$$\frac{92}{103} \times 100 = \mathbf{89\%} \text{ of boys are enrolled in primary school}$$

The above-process can also be applied to calculating the percentage of refugee children aged 6-11 with specific needs attending grades 1-6, and also the percentage of refugee adolescents' aged 12-17 attending grades 7-12.

It is also recommended that each school keep a book with a list of students who have dropped out of school. This is important because if there is a high drop out rate, it can be determined whether this is due to repatriation or another cause (such as forced recruitment or early marriage). This information should be compared with the proGres data every 3 months to see if the child has in fact simply repatriated, or once every month in areas of high repatriation.

Finally, while the indicators for enrolment have pre-determined age groups for primary and secondary students, **there is a certain degree of flexibility with these age groups**. If for example, children within your country of operation attend primary school from ages 7-11, then this age group can be used to reflect primary school enrolment. However, this change **must** be accounted for in both the numerator and the denominator. For example, if there were 92 students going to primary school aged 7-11, and 115 children aged 7-11, your equation would look like this:

$$\frac{92}{115} \times 100 = 80\% \text{ of refugee children aged 7-11 attend primary school}$$

If the age categories need to be altered to reflect the situation in your country of operation this should be made note of in your comments column. While modifying age groups can be done in order to adapt to each country programme, it should be stressed that **age groups can be modified only if the numerator and the denominator match**. (i.e. the number of 7-11 year olds in school must be divided by the total number of 7-11 year olds, and not divided by the number of 6-11 year olds).

3.2 Common Challenges with Enrolment Indicators

The enrolment indicators are perhaps the most difficult indicators to calculate accurately for several reasons. As we saw in the above example, the percentage of refugee children enrolled in primary school should be calculated by dividing the numerator, ‘the number of school-aged refugee students (i.e. those aged 6-11),’ by the denominator, ‘the number of refugees aged 6-11’ What often happens however is that **over-aged refugees** and **local children** are included in the numerator because they too are attending a primary school in a refugee camp. However, bearing in mind that the denominator, only accounts for **refugee students aged 6-11**, you often end up with enrolment figures of over 100 per cent. We will use an example to more clearly demonstrate how this can create problems.

In primary school there are 315 students enrolled (the numerator), and there are 267 registered refugee students aged 6-11 (the denominator). To calculate the percentage of enrolled refugee children at primary school your equation would look like this:

$$\frac{315}{267} \times 100 = \mathbf{118\%}$$
 are enrolled in primary school

However, it is not possible for enrolment to be over 100 per cent. What has happened is that over-aged refugee children and local children have been included in the numerator and not in the denominator. To further illustrate how this can create analysis and programming challenges, let us say that of the children included in the numerator, only 183 were actually refugee students aged 6-11. As such, the real enrolment percentage for refugee children aged 6-11 enrolled in primary school would be:

$$\frac{183}{267} \times 100 = \text{only } \mathbf{70\%}$$
 of refugee children aged 6-11 are
in fact enrolled in grades 1-6

3.3 Gender Parity (and the confusion with female enrolment rates)

The primary operational purpose of gender parity is to determine if there is gender equality between girls and boys in the classroom, and if girls are being particularly discriminated against as regards access to education.

When calculating female enrolment rates such as in the above examples, what is sometimes (mistakenly) calculated is the gender parity in the classroom.

Taking the same example, we will determine if gender parity has been achieved with 85 girls and 92 boys enrolled in primary school. This gives us a total of 177 children enrolled.

A quick way to determine whether or not gender parity has been met in the classroom is to divide the numerator, in this case the number of girls enrolled by the denominator, the total number of students enrolled. Your calculation will look like this:

$$\frac{85}{177} \times 100 = \mathbf{48\%}$$
 of the students are female

In the above example gender parity has almost been achieved, with 48 per cent of the students being female and 52 per cent of the students being male.

What sometimes occurs however is that this figure (i.e. 48 per cent) is reported as the percentage of girls enrolled in school, and not as the gender parity. As we can see here, there is a large difference between 48 per cent girls' enrolment and 80 per cent girls' enrolment in school.

This confusion can cause problems in two major regards. Firstly, the percentage of female children who are not enrolled in school remains unknown. Secondly, because the percentages reported are not correct, serious programming, policy and funding decisions may be made based on data which is not indicative of the actual situation.

3.4 Percentage of adolescents aged 15-24 years enrolled in training

The primary operational purpose of calculating the percentage of 15-24 year olds enrolled in training is to assess the percentage of adolescents who have access to programmes which can help them build skills for the future and facilitate the securing of livelihoods.

Calculating this indicator also requires that only refugees of this specific age group are included. The percentage is determined by dividing the numerator, the number of refugees aged 15-24 enrolled in training, by the denominator, the total refugee population aged 15-24. If for example there were 37 refugees aged 15-24 enrolled in training and a total of 103 refugees aged 15-24, your equation would look like this:

$$\frac{37}{103} \times 100 = 36\% \text{ of adolescents aged 15-24 are enrolled in training}$$

This can be a particularly difficult indicator to calculate because the age group being asked for does not correspond easily with the age breakdown requested on population statistics at the beginning of the Standard and Indicator Reports. However if your operation has access to the proGres data, you should be able to easily derive your denominator (i.e. the total population of refugee adolescents aged 15-24).

Depending on how your operation is structured, you may have multiple implementing partners who have data on the number of 15-24 year olds in training programmes. To calculate this indicator, you should add together all the individuals aged 15-24 in all the training programmes from all the partners.

3.5 Number of students per teacher

The operational purpose of knowing the number of students per teacher is to assess the quality of education, as well as the capacity of schools and teachers to provide quality education.

Unlike the enrolment indicators, this indicator requires that you include **all students in the classroom** (including over-aged and local children), not just school-aged refugee children. The numerator for this indicator is the total number of students at school, divided by the denominator, the total number of teachers in the school.

If for example you had 336 students in the school and 14 teachers, your calculation will look like this:

$$\frac{336}{14} = 24 \text{ students per teacher}$$

Similarly, if you are calculating student-to-textbook ratios, or student-to-desk ratios, you should include all children in the classroom, regardless of nationality or age.

3.6 Percentage of Qualified or Trained Teachers²

The operational purpose of calculating the percentage of qualified or trained teachers is to assess the quality of education being provided to the students.

Knowing the percentage of qualified teachers is particularly important in order to assess whether or not displaced children and adolescents are receiving quality education.

The percentage of qualified teachers is determined by dividing the numerator, the total number of qualified and trained teachers, by the denominator, the total number of teachers. If for example there are 15 qualified or trained

² Refers to teachers who possess an official teacher qualification, or who have completed a ten-day teacher training course.

teachers and 23 teachers overall, your equation would look like this:

$$\frac{15}{23} \times 100 = 65\% \text{ teachers are qualified or trained}$$

When looking at statistics on teachers, it is also important to be able to calculate the number of female teachers (both qualified and unqualified). Frequently, there are far fewer female teachers than males teachers, which can have particularly adverse effects on girls' school enrolment.

3.7 Percentage of Female Teachers

The operational purpose of calculating the percentage of female teachers is to assess gender equality among teachers. Having a sufficient number of female teachers is essential in retaining female students and securing a safe learning environment.

To calculate the percentage of female teachers you divide the numerator, the total number of female teachers by the denominator, the total number of teachers. For example, if there were 9 female teachers and 23 teachers overall, your equation would look like this:

$$\frac{9}{23} \times 100 = 39\% \text{ of teachers are female}$$

Let us say for example that of the 9 female teachers only 6 were qualified. If you wanted to know the percentage of female teachers who were qualified, and also the percentage of qualified female teachers overall, your two equations would look like this:

$$\frac{6}{9} \times 100 = 66.67, \text{ or } 67\% \text{ of female teachers are qualified}$$

$$\frac{6}{23} \times 100 = 26\% \text{ of all teachers are qualified female teachers}$$

A similar process can be followed to calculate the percentage of qualified male teachers, and also what percentage of the teaching population is comprised of qualified male teachers.

4. Why are Accurate Calculations Important and what is the Data Used For?

Accurate and systematic calculation and collection of education statistics is important for several reasons. Accurate calculation makes it possible to assess the education situation and determine where the gaps are.

Also, it is very difficult to compare whether progress has been made each year in improving both access to and

quality of education, if the data cannot be compared over time. Similarly, programming decisions that are not based on the indicators may not in fact target the largest education gaps, because these gaps have not been properly identified.

The education standard and indicator information is also important to secure funding from donors and potential donor countries and organizations. If, for example, all of the countries in region A are reporting over 100 per cent enrolment and/or 100 per cent of qualified teachers, it would appear as if these countries are doing very well as regards access to and quality of education. In reality however, enrolment may only be at 70 per cent and only 60 per cent of the teachers may be qualified teachers. Having the right statistics is extremely beneficial, as they serve as a ‘signal’ when there are major gaps as regards refugee education. If and when gaps are identified, more resources can be channeled and allocated accordingly.

The data collected can also be used to seek out new and strengthen existing partnerships. If UNHCR notices for example that there is a very low percentage of 15-24 year olds enrolled in training programmes, then UNHCR and relevant partners can use this information to address this gap and strengthen non formal education activities.

5. Helpful Resources

General information on UNHCR statistics, including standards and indicators can be found on the website: www.unhcr.org

UNHCR Education
<http://www.unhcr.org/protect/405027d34.html>

Internal Resources

Practical Guide to the Systematic use of Standards and Indicators in UNHCR Operations (Second Edition). February 2006.

The Operational Data Management Learning Programme. <http://intranet.hcrnet.ch/>. Available by clicking on ‘Staff Development,’ ‘Learning Activities,’ and then ‘Operations.’