



METHODOLOGY SHEET FOR GLOBAL PARTNERSHIP FOR EDUCATION (GPE) INDICATORS

Indicator title	Indicator (3) Number of equivalent children in basic education (primary and lower-secondary levels) supported annually by the Global Partnership
Result measured (from GPE Results Framework):	Strategic Goal (2) Increased equity, gender equality, and inclusion In addition to measuring progress in education, this indicator can inform whether GPE funding to education systems is reaching the maximum number of children in school. Strategic Objective (3) GPE financing efficiently and effectively supports the implementation of sector plans focused on improved equity, efficiency and learning).
JUSTIFICATION FOR INDICATOR	
Background/context for indicator:	According to the 2015 EFA Global Monitoring Report, notable progress has been made towards achieving the Education for All goals established in 2000. For instance, the number of out-of-school children along with the percentage of children who have never been to school dropped in 2015 from previous years on a global level, while net enrollment ratios increased. ¹ In particular, the number of out of school children of primary age decreased from 204 million in 1999 to 121 million in 2012, worldwide. However, challenges remain, especially in GPE partner countries. In 2013, respectively 20.3 % and 33.4 % of primary and lower secondary school age children were out of school in GPE countries.
Rationale for indicator selection:	The GPE Strategic Plan 2020 aims to increase equity, gender equality and inclusion for all in a full cycle of quality education, targeting the poorest and most marginalized, including by gender, disability, ethnicity and conflict or fragility. ² On the basis of its Strategic Plan, GPE is committed to strengthen its support to partner countries' efforts towards improving access to education for all children.
	Given the fact that GPE grants are mostly channeled through the partner countries' education spending system, it is important to understand the extent to which GPE contributes to the local effort. In particular, this indicator allows the Partnership to assess the extent to which its grants make a meaningful impact on access to education for children enrolled in basic education, relative to the cost of education paid by the public sector. Furthermore, it provides a rough means to think about the extent of GPE impact in a tangible way, and against which GPE can measure its objectives.

¹ UNESCO. Education for All (EFA) Global Monitoring Report 2015. *Education for All 2000-2015: Achievements and Challenges*. Retrieved 5/26/2016 from: <http://unesdoc.unesco.org/images/0023/002322/232205e.pdf>

² Global Partnership for Education (GPE) Strategic Plan 2016-2020. p.12, *GPE 2020: Improving learning and equity through stronger education systems*. Retrieved 5/26/2016 from: <http://www.globalpartnership.org/about-us/strategy>

Note that grants do not always fund education systems on a per child basis, therefore the indicator is only a proxy for the actual number of children reached by GPE. Specifically, depending on how a given GPE grant is used by a country and the nature of country-level projects implemented, its impact may affect more or less children than estimated by the indicator. For instance, Rwanda has received GPE grants of USD 175 million since 2007, and part of these funds were used to improve textbook distribution.³ Funds were expended for learning materials based on total student enrollment. Here, the impact of the aid disbursed by GPE to Rwanda is in theory, but not in practice, the number of additional Rwandan children enrolled (likely more children were impacted by the grant than the indicator would suggest). Similarly, if GPE grants are used for training lower-secondary teachers, the number of additional lower-secondary children enrolled serves as a concrete proxy measure of the impact or “buy” of the GPE grant; however, this measure would underestimate the actual impact the GPE grant has on learning outcomes if one assumes that teachers are able to impact learning outcomes for multiple cohorts of children over time.

DEFINITION

Number of equivalent children in basic education supported annually by GPE, as measured by total enrollment at each basic education level (primary and lower-secondary) per annum.

In theory, the indicator is a measure against which the Partnership can correlate the number of additional children enrolled in basic education to GPE grants disbursed. However, as above, note that GPE grants do not fund programs on a per child basis; hence, in practice, GPE grants disbursed to a country will not always map directly to the number of children enrolled at the basic education level in that country.

This measure should therefore be understood as a rough proxy, which can be broadly understood as “equivalent to” the number of additional children enrolled in basic education as a result of the disbursements of GPE grants in a particular year. It is calculated by dividing country-level disbursements by country-specific public expenditures per child in basic education for each developing country partner that received a GPE grant in that year. Details are provided below.

Indicator definition:	
Unit of measurement:	Number
Disaggregation:	By fragile and conflict-affected states, and by gender
Year for data reported (select only one and mark an “x”)	<input type="checkbox"/> fiscal year <input checked="" type="checkbox"/> calendar year

Frequency of data collection:	Annual
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DATA TREATMENT

Source of information for collecting data:	Source document, template, etc.:	Standardized grant reporting templates, UNICEF data for unit costs, World Bank data for inflation rates.
	Source agency:	GPE Secretariat, UNICEF, World Bank
Formula:	This is calculated by dividing the value of GPE grants to a country by	

³ Global Partnership for Education (GPE). *Books for All: Rwanda's Innovative Textbook Distribution Program*. Retrieved 5/26/2016 from: <http://www.globalpartnership.org/success-stories/books-all-rwanda%20%99s-innovative-textbook-distribution-program>

government expenditure per student at a given basic education level, in a given year.

Step 1: estimate values for government expenditure per primary school child

Given limited availability of expenditure data, the following steps are adopted in order of preference for estimating government expenditure per primary school child. Note that spending estimates are performed by the Secretariat based on UIS data if there is at least one set of relevant data points within the five years prior to the most recent available data (typically UIS data is released with a two-year lag relative to the current year).

1. If available, use UIS data for primary spending per child as downloaded
2. If (1.) is not available, estimate primary spending using individual components for country j (J total developing country partners in the sample):
 - (a) **download government expenditure on education as % of gross domestic product (GDP) in time t, %EEX_{t,j}:** UIS provides data for Government expenditure on Education as % of GDP, defined as the “total general (local, regional and central) government expenditure on education (current, capital and transfers), expressed as a percentage of GDP,” which includes “expenditure funded by transfers from international sources to government.”⁴
 - (b) **download country-level GDP, GDP_j:** as per UIS data, else as per World Bank World Development Indicators if most recent year not available in UIS database
 - (c) **calculate USD amount of total government expenditure on education in time t, EEX_{t,j}:** to obtain the amount of total government expenditure on education, multiply GDP by government expenditure on education as % of GDP.

$$EEX_{t,j} = GDP_{t,j} \times \%EEX_{t,j}$$

where:

j = country 1, country 2,...country J (i.e. total of J DCPs in the sample)

- (d) **download data for expenditure on primary education as % of total government expenditure on education in time t, %EEX_{pri,t,j}:** as per UIS data⁴
- (e) **calculate USD amount of total government expenditure on primary education in time t, EEX_{pri,t,j}:** multiply total general government expenditure on education by the expenditure on primary education as % of total government expenditure on education

$$EEX_{pri,t,j} = \%EEX_{pri,t,j} \times EEX_{t,j}$$

- (f) **download data for total (gross) enrolment in primary education in time t, GE_{pri,t,j}:** as per UIS data, the number of individuals officially registered in the Primary Education level, regardless of age.⁴
- (g) **Calculate USD amount of government expenditure per student in primary education, eex_{pri,t,j}:** divide the total USD amount of government expenditure on primary education by the total enrollment in primary education.

⁴ UNESCO Institute of Statistics (UIS). *UIS Glossary*. Retrieved 5/26/2016 from: <http://glossary.uis.unesco.org/glossary/en/home>

$$eex_{pri,t,j} = \frac{EEX_{pri,t,j}}{GE_{pri,t,j}}$$

3. If no UIS data for the country is available for the five most recent years, alternative sources are considered to estimate values for expenditure per student, including national documents, GEMR reports etc.

Step 2: estimate values for government expenditure per lower-secondary school child, $eex_{ls,t,j}$

Data on spending at the lower secondary level is limited in coverage and is somewhat less reliable than data on spending at the primary level. Therefore, an assumption is employed to estimate spending per child at the lower secondary level, namely that spending is 1.8 times greater than expenditure per student in primary education. This ratio is based on the average across GPE countries assessed to have reliable data across both levels of education. Formally:

$$eex_{ls,t,j} = 1.8 \times eex_{pri,t,j}$$

Step 3: use World Bank inflation data to adjust expenditure per child data to reflect values in the current year.

In order to reflect costs for the year in which GPE disbursements are considered, expenditure per child must be adjusted. For example, in the base year, 2015, if expenditure is for the year 2013, apply 2014 and 2015 inflation rates in order for costs to be comparable to disbursements.

Step 4: Collect USD value of GPE grants disbursed to country j in the year under consideration, D_j .

Data for the value of GPE grant disbursement is tracked by the GPE Secretariat – note that this refers to actual funds disbursed to the country, not funds held by the grant agent.

Step 5: Calculate equivalent children supported in (i) primary, $ECS_{pri,t,j}$, and (ii) lower secondary education, $ECS_{ls,t,j}$:

- i) It is assumed that 85 percent of the GPE grant disbursed to a country is allocated to primary education. Thus, multiply USD amount of GPE grant disbursement by 0.85, and divide the result by the USD amount of government expenditure per student in primary education.

$$ECS_{pri,t,j} = \frac{0.85 \times D_j}{eex_{pri,t,j}}$$

- ii) The remaining 15 percent of the GPE grant disbursed to a country is assumed to be allocated to lower-secondary education. Thus, multiply USD amount of GPE grant disbursement by 0.15, and divide the result by the USD amount of government expenditure per student in lower-secondary education.

$$ECS_{ls,t,j} = \frac{0.15 \times D_j}{eex_{ls,t,j}}$$

Step 6: calculate total equivalent children supported in country j, $eex_{t,j}$, by summing equivalent children supported in primary and lower secondary

	$ECS_{t,j} = ECS_{pri,t,j} + ECS_{ls,t,j}$
	<p>Step 1: calculate aggregate equivalent children supported ($eex_{t,J}$) across all J countries who received GPE grants in the year under consideration:</p> $ECS_t = \sum_j^J ECS_{t,j}$ <p>j = country 1+2...+ J (i.e. sum of all J DCPs in the sample)</p> <p>Step 2: find aggregate equivalent children across FCACs</p> <p>For all K countries classified as fragile and conflict-affected as per the GPE definition (where K < J), sum equivalent children supported:</p> $ECS_{FCACt} = \sum_k^K ECS_{t,k} \text{ where countries } f = 1, 2, \dots, K \text{ are classified as FCAC}$
Aggregation formula:	<p>Step 3: calculate the number of total equivalent children supported who are girls, $ECSf, t$:</p> <p>(a.) Download UIS data on gross enrolments in primary for both sexes, $GE_{pri,t,j}$, and specifically on gross enrolment for girls, $GE_{pri,f,t,j}$ in primary for all countries in the sample. Find the proportion of girls enrolled relative to the total ($PROP_{f,t}$) across all countries in the sample:</p> $PROP_{f,t} = \frac{\sum_j^J GE_{pri,f,t,j}}{\sum_j^J GE_{pri,t,j}}$ <p>NOTE: primary enrolments are used as a proxy for enrolments in basic education given better data coverage than lower secondary enrolments. This is considered acceptable in light of the high proportion of GPE grants assumed to be directed towards primary education.</p> <p>(b.) Apply this proportion to total equivalent children, as calculated in Step 1:</p> $ECSf, t = ECSt * PROP_{f,t}$ <ol style="list-style-type: none"> 1. Data on enrollment and government expenditure in each of the different types of educational institutions in a given country is not always complete or reliable. This means that data used as an input for expenditure at the primary level may not be reliable. 2. Some countries, particularly those with low capacity, do not disaggregate data by level of education, therefore requiring estimates for the share of education spending at primary and/or lower-secondary level. Furthermore, given the extent of missing and incomplete data at the lower secondary level, the Secretariat makes an assumption, based on its own analyses, to calculate expenditure per child at this level (i.e. that lower secondary spending is 1.8 times greater than at the primary level), which may not hold. 3. Some countries, particularly those with low capacity, do not disaggregate data by level of education, therefore requiring estimates for the share of education spending at primary and/or lower-secondary level. 4. It is not always possible to disaggregate the use of GPE grants by level of education, therefore it is assumed that 85 and 15 percent of disbursements are allocated to primary and lower-secondary education respectively. 5. Since calculation of the indicator considers only public expenditure per

	<p>child (as per UIS) and excludes private spending, it underestimates the actual cost of education and may therefore overestimate the number of children that could be effectively educated thanks to GPE grants. This is particularly problematic given wide variation in the average proportion of education costs borne by households, which means that this overestimation is not systematic across developing country partners. For instance, in the DRC, about 72 % and 77 % of the total spending on primary and on lower secondary education respectively are provided by the households.⁵ Households' commitment to education spending is much lower in Nigeria compared to the DRC. In Nigeria, households provide about 34 % of the total education spending on basic education.⁶</p> <p>5. Even with a constant or increasing level of GPE funding, the value of this indicator is heavily contingent on which countries are receiving funding in a given year; in particular, whether unit costs are high or low. It is therefore important to recognize that a decline in equivalent children supported may not imply worse performance by GPE. A decline in equivalent children supported, when associated with rising unit costs rather than decreased disbursements, may, in fact, reflect a number of positive or arguably neutral outcomes, including increasing country wealth with associated increases in in the cost of living (including teacher salaries and education costs), a larger proportion of grants focused on countries where the cost of education is higher, or a shift in burden of education costs away from households and towards the public sector.</p>
Interpretation	<p>The indicator should be interpreted as a proxy for the actual number of children reached by GPE. As GPE grants do not fund programs on a per child basis, in practice, GPE disbursements to a country will not always map directly to the number of children enrolled at the basic education level in that country. Specifically, depending on how a given GPE grant is used by a country and the nature of country-level projects implemented, its impact may affect more or less children than estimated by the indicator. In addition, even with a constant or increasing level of GPE funding, the value of this indicator is heavily contingent on which countries are receiving funding in each year; in particular, whether unit costs are high or low. It is therefore important to recognize that a decline in equivalent children supported may not imply worse performance by GPE. A decline in equivalent children supported, when associated with rising unit costs rather than decreased disbursements, may, in fact, reflect a number of positive or arguably neutral outcomes, including increasing country wealth with associated increases in in the cost of living (including teacher salaries and education costs), a larger proportion of grants focused on countries where the cost of education is higher, or a shift in burden of education costs away from households and towards the public sector.</p>

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- Global Partnership for Education (GPE) Strategic Plan 2016-2020. p.12, *GPE 2020: Improving learning and*

⁵ World Bank. *Revue des Dépenses Publiques du secteur de l'éducation en République Démocratique du Congo*. p.43.

⁶ World Bank. *Governance and Finance Analysis of the Basic Education Sector in Nigeria*. P. 47.

equity through stronger education systems. Retrieved 5/26/2016 from:
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- World Bank. *Governance and Finance Analysis of the Basic Education Sector in Nigeria.* P. 47.

ANNEXES

Annex 1- Standard Operating Procedure

Process Name: Data Collection, Quality Assurance, & Storage for Indicators # 3	Owner: R&P Team	Updated:
Function: Measuring GPE Impact	Version #: 1	Review:
Material changes from prior version of SOP		
None; this is the first version.		
Summary This SOP describes the process for data collection, quality assurance, and storage for indicator # 3 (Cumulative number of equivalent children supported for a year of basic education (primary and lower secondary) by GPE) of the GPE results framework.		
Results / Outputs This process should result in the results framework being updated with quality assured data on indicator # 3. Interim outputs of the Secretariat: Completed data collection template Final Output: Updated results framework database		
Scope <ul style="list-style-type: none"> • Begins: The process begins with the M & E Data Analyst collecting the required data on grant disbursements, children enrolled and inflation from GPE colleagues and publically available resources such as UIS data and World Bank data corresponding to the reference financial year (or in cases where data for the reference financial year is not available, the latest available data) wherever applicable. • Ends: The process ends with updated data being integrated into the results framework database by the Monitoring and Evaluation Data Manager. • Includes: All procedural aspects • Excludes: Methodological aspects of calculating the indicator value. These can be found in the methodology sheet. • Note: Data will be collected annually based on calendar year 		
Standards (Policies, Approvals, Deadlines, etc.): <ul style="list-style-type: none"> • Policies: GPE 2020, Monitoring Sheet for GPE Results Framework Indicator #3 • Deadlines: M & E Data Manager updates results framework database with the Indicator # 3 data by 30th April • Approval: The completed data template is prepared by the M&E Data Analyst and includes quality checks by the M & E Data Manager and final approval by the head of M & E 		

Issues /Risks: <ul style="list-style-type: none"> • Data may not be available on time and this might delay the process. 			
Overview:			
Steps in the Process	Roles / Responsibilities	Outputs / Deliverables	Tools / Templates
1. Collect Data			Typically by 28th February
<ul style="list-style-type: none"> • Collect the required data on grant disbursements, children enrollment and inflation from GPE colleagues and publically available resources such as UIS data and World Bank data corresponding to the reference financial year (or in cases where data for the reference financial year is not available, the latest available data) wherever applicable. 	<ul style="list-style-type: none"> • M & E Data Analyst 		
2. Aggregate Data			Typically by 30th March
<ul style="list-style-type: none"> • Enter data into the template provided by the M&E Data Manager 	<ul style="list-style-type: none"> • M & E Data Analyst 		Data Collection Template
<ul style="list-style-type: none"> • Compute indicator values using the completed data collection template, based on the latest available classification of countries affected by Fragility and Conflict and forward to M & E data Manager. 	<ul style="list-style-type: none"> • M & E Data Analyst 	Completed Data Collection Template	List of countries affected by Fragility and Conflict from the GPE Intranet
<ul style="list-style-type: none"> • Review completed data collection template and send comments/queries to the M & E Data Analyst 	<ul style="list-style-type: none"> • M & E Data Manager 		
<ul style="list-style-type: none"> • Respond to the comments/queries, updates data collection template as necessary and forward to M & E data Manager 	<ul style="list-style-type: none"> • M & E Data Analyst 	Updated data collection template	
3. Update Results Framework Database			Typically by 30th April
<ul style="list-style-type: none"> • Forward data collection template to the Head of M & E for review and approval. 	<ul style="list-style-type: none"> • M & E Data Manager 		
<ul style="list-style-type: none"> • Review & approve completed data collection template 	<ul style="list-style-type: none"> • Head of M & E 	Approved data collection template	
<ul style="list-style-type: none"> • Update results framework database using completed template submitted by the M & E Data Analyst 	<ul style="list-style-type: none"> • M & E Data Manager 	Updated results framework database	N/A

<ul style="list-style-type: none">Notify the secretariat on the availability of data in the results framework database through the intranet	<ul style="list-style-type: none">M & E Data Manager	Notification on GPE intranet	
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