Supp-4

Indicator	Supp-4: Percent of learners targeted for USG assistance with an increase of at least one proficiency level in math at the end of grade 2
Definition	**Defining Learners –** A learner is an individual who is enrolled in an education program for the purpose of acquiring basic education skills. Learners who are enrolled in formal primary school or the non-formal equivalent of primary school can be counted towards this indicator. This includes, but is not limited to, learners enrolled in government schools, NGO-run schools, schools run by faith-based organizations, and accelerated or alternative learning programs, so long as the school or program is designed to provide an education equivalent to the accepted primary-school curriculum and leveled at grade 2. **Measuring Math Skills –** Math skills must be measured to report on the percent of learners with an increase of at least one proficiency level in math. Math skills should be measured through a grade-2-level assessment that has satisfactory psychometric validity and reliability, and is not subject to corruption, cheating, or score inflation. Examples of assessment systems that are acceptable can include, but are not limited to, country-specific national assessment systems, Early Grade Math Assessments (EGMA), and Annual Status of Education Report (ASER) assessments. The language(s) of assessment will be determined by country policies. **Setting Proficiency Benchmarks –** Proficiency levels should be defined according to math proficiency standards set by host country governments, preferably aligned with international standards as defined in the Global Proficiency Framework (GPF). They should be tailored to the language, context, and assessment utilized. These standards include four levels – "does not meet proficiency standards," "partially meets proficiency standards," "meets minimum proficiency standards," and "exceeds minimum proficiency standards." The toolkit that countries and activities can use to set internationally linked benchmarks across these four levels is available here. Note that the methodology presented in the toolkit allows countries to continue using their current assessment systems and also requires that benchmarks be set by local teaching and language experts. Activities are strongly encouraged to work with host-country governments to set internationally linked benchmarks using the toolkit above. If countries have not yet set internationally linked benchmarks across these four levels, use country-level benchmarks set for these levels for math proficiency as a second-best option to report against this indicator. If a country does not have four levels of proficiency defined, activities should justify how they are determining a shift in a level of proficiency in the indicator narrative. In the absence of a context-specific benchmark, a possible alternative is to count the increased percentage of learners not obtaining zero scores and add that to the percentage moving from a non-zero score to "meeting minimum proficiency" on an assessment of learner math skills mastery in the intervention areas. Note, the narrative for this indicator must include details on whether the numbers reported under this indicator are based on internationally linked benchmarks, country-level benchmarks not linked with international standards, or the alternative metric offered as a third-best option. **Calculating Change in Proficiency Levels –** A change from one proficiency level to another means a change in the percentage of learners falling into a specific proficiency level (or bucket) category between baseline and the year reported. Activities should use

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a cohort assessment method (sampling different populations of grade 2 learners in the baseline year and in subsequent years) or a panel sampling method (sampling learners for a baseline at the beginning of grade 2 in the control and treatment group and then sampling those same learners at the end of grade 2). If an activity chooses to use a cohort approach, the activity should assess a representative sample cross-section of learners at the same time in the school year (as close to the end of the school year as possible) and will report the change in percentage of learners falling into each proficiency level. When using a cohort approach, activities will use the following formula:

Baseline (B) – Midline (M) or Endline (E) for "Does not meet" category + M or E – B for the "Meets" + "Exceeds" categories.

If using a sample, numbers reported must be a sample-based estimate (extrapolated to the total beneficiary population). Note that this formula is simplified to allow for ease in measurement. Also note that the "partially meets" category is left out to avoid double counting, as those learners will have either moved up from the "does not meet" category or down from the combined top category. Also, note that a midline assessment can be used to assess progress part way through an activity. See examples below for clarity.

Example 1:

Level	Baseline	Midline	Formula
Does not meet minimum proficiency standards	55%	40%	B–M: 55–40 = 15 percentage points
Meets or exceeds minimum proficiency standards	25%	35%	M–B: 35–25 = 10 percentage points
Total reported change			**15+10 = 25 percentage points**

Example 2:

Level	Baseline	Midline	Formula
Does not meet minimum proficiency standards	40%	30%	B–M: 40–30 = 10 percentage points
Meets or exceeds minimum proficiency standards	10%	5%	M–B: 5–10 = -5 percentage points
Total reported change			**10+(-5) = 5 percentage points**

A cohort sampling method is the most common method of reporting on tracking this indicator. If an activity chooses a panel sampling method, learners should be tracked longitudinally and assessed at the beginning and end of the school year. With a learner-level panel approach, simply count when a learner moves from one category of proficiency to another. Individual learner changes can be added together (note, a movement down, from "meets" to "partially" for example, would count as a negative movement, and a movement up, from "partially" to "exceeds" for example, would count as a positive, regardless of how many levels the learner moves up). With a classroom or a school-level panel, the formula described above for a cohort study can be used. If a

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	panel method is used to report on this indicator, it is strongly recommended that the activity test learners from a comparable sample from control schools to separate the effects of the intervention from the effects of a typical year of schooling. **Sampling Learners –** Activities that rely on a sample of learners rather than a census to report results should ensure representation of characteristics that are important for understanding differences in outcomes (e.g., geography, sex, etc.) when sampling. **Defining "Targeted for USG Assistance" –** USG assistance is defined as financial or technical assistance designed to improve math outcomes specifically or learning outcomes more generally. Examples of USG education assistance that fall into this category can include, but are not limited to: pedagogical training for teachers; administrator training; providing teaching and learning materials (TLM); training teachers on continuous assessment and remedial instruction; support for tracking and teaching students by ability groups; support for policies and procedures that increase time on task; training and support of teacher coaches; work to reduce class size; work to improve the safety of schools; support for more inclusive school environments and better socio-emotional learning outcomes; strengthening of teacher and school incentive structures; interventions to impact system performance and service delivery that are designed to produce evidence-based, measurable outcomes at the classroom level; etc. A learner "targeted for USG assistance" is one who is in a grade 2-classroom, or its non-formal equivalent, in which a USG educational intervention is planned for the future (at baseline) or has already occurred (later years—e.g., midline and endline, of the same intervention). **Defining the Baseline Numerator and Denominator Values –** The denominator value is the number of students in grade 2 (or non-formal equivalent) targeted by the intervention. The numerator is the number of students among those targeted by the intervention with an increase of at least one proficiency level, as defined above. Conduct a baseline at the beginning of an intervention to report against this indicator. However, at baseline of a USG intervention, the numerator will be zero for that intervention, as no learners will have yet been reached with that specific USG math or education intervention. Note, it is highly possible that learners will have been reached at baseline by a past USG intervention, but these learners should not be counted toward the numerator or denominator if that activity has concluded. Also note that if an OU has more than one activity or intervention working toward improved math outcomes, it is possible that one intervention will have outcomes to report against this indicator even while a second intervention is reporting zero for baseline. **Multiple Interventions –** If two or more interventions are working in the same areas, beneficiaries should not be double counted under this indicator. Each individual should only be reported once under this indicator, regardless of whether that individual benefitted from more than one activity (however, one individual could be reported as increasing proficiency levels in both reading and math under this indicator and ES.1-48: *Percent of learners targeted for USG assistance with an increase of at least one proficiency level in reading at the end of grade 2*).
Primary SPS Linkage	ES.1

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Linkage to Long-Term Outcome or Impact	This indicator helps to measure progress toward the long-term outcome of proficiency in math. Many countries perform fairly poorly on indicator Supp-3: *Percent of learners targeted for USG assistance who attain a minimum grade-level proficiency in math at the end of grade 2*. As such, it is not feasible for most USG interventions to move all children with zero scores on their math assessments to meeting minimum proficiency during the activity's limited period of performance. This indicator offers those USG activities the opportunity to demonstrate progress toward the long-term outcome of proficiency in math. The opportunity to obtain an education (as demonstrated through learning outcomes) is a basic human right. Further, when a learner has foundational math skills, that child is then able to gain access to further education. It is impossible for learners to succeed in school if they do not know how to do math. Failing to learn negatively affects attendance, increases dropouts, and results in unsuccessful and abortive school careers for millions of young children. In order to advance learning outcomes, education systems must ensure that all children learn foundational math skills in the primary grades. Early education, as demonstrated through learning outcomes, also opens up more doors for children as they become youth. They gain access to increased job opportunities (where opportunities exist) and ultimately work to boost the economy if they become gainfully employed. In the long run, this promotes a more self-reliant country with increased human capacity to continue advancements in development.
Indicator Type	Outcome
Reporting Type	Percent, with both numerator and denominator reported
Use of Indicator	This indicator provides a sense of the overall success of USG early grade education programs at improving learning outcomes, specifically math skills. It will be used, along with other education-related standard indicators, to report progress and results on priority outcomes under both the USG Education Strategy and USAID Education Policy. USG agencies, USAID/Washington, and USAID OUs will also use the results of this indicator to determine how best to target interventions and sub-populations (as reported under the indicator disaggregates).
Reporting Frequency	Report against this indicator as frequently as once per year based on when they collect math assessment data. This could be annually, every two years, every three years, etc.
Data Source(s)	• Official Government Records, if they align with USG activity areas and targeted beneficiaries • Official Reports from Implementing Partner(s) that include results from primary data collection and analysis using national assessments, EGMAs, ASER, or other leveled math assessments in USG activity areas • Analysis of secondary data on math outcomes (e.g., ASER, EGMA), so long as the data align with USG activity areas and targeted beneficiaries
Bureau Owner(s)	**Agency:** USAID **Bureau and Office:** DDI/EDU **POC:** Benjamin Sylla; Senior Education Advisor; Center for Education | bsylla@usaid.gov **Technical POC:** Elena Walls; Senior Monitoring, Evaluation, and Learning Advisor; Center for Education | ewalls@usaid.gov
Disaggregate(s)	• Number of learners with an increase of at least one proficiency level in math (numerator) • Number of learners in target beneficiary group (denominator)

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	• Number of male[1] learners with an increase of at least one proficiency level in math (numerator) • Number of male[1] learners in target beneficiary group (denominator) • Number of female[1] learners with an increase of at least one proficiency level in math (numerator) • Number of female[1] learners in target beneficiary group (denominator) • Number of learners with a disability[2] with an increase of at least one proficiency level in math (numerator) • Number of learners with a disability[2] in target beneficiary group (denominator) • Number of learners affected by conflict or crisis[3] with an increase of at least one proficiency level in math (numerator) • Number of learners affected by conflict or crisis[3] in target beneficiary group (denominator) [1] **All USG interventions reporting on this indicator MUST report on the sex disaggregates.** Activities that rely on a sample of learners rather than a census to report results should sample to ensure representation of males and females. [2] The USAID Education Policy defines children and youth with disabilities as those who have long-term physical, mental, intellectual, or sensory impairments that, in interaction with various barriers, may hinder their full and effective participation in society on an equal basis with others. **Only activities that are focused on improving outcomes of learners with disabilities need to report on this disaggregate.** This includes activities that identify learners with disabilities as a target beneficiary or sub-beneficiary group. Activities that do not have an explicit focus on outcomes for learners with disabilities are not required to report on this disaggregate. For example, activities that broadly support differentiated and inclusive instruction but do not target specific learning outcomes for learners with disabilities need not report on this disaggregate. Activities that rely on a sample of learners under the age of 18 rather than a census to report results should sample to ensure representation of learners with disabilities. Activities should use a pre-existing or custom age-appropriate tool to identify disability status. USAID's Disability Identification Tool Selection Guide and USAID's How-To Note: Collecting Data on Disability Prevalence in Education Programs may be helpful. [3] Please see the USAID Education Policy for definitions of "conflict-affected" and "crisis-affected." Activities in which only some individuals are affected by crisis or conflict and which rely on a sample rather than a census of learners for data collection should sample to ensure representation of individuals affected by crisis or conflict.