

Indicator	ES.X-X Percent of learners with an increase of at least one proficiency level in math at the end of grade 2 with USG assistance
Definition	<p>Defining Learners - A learner is an individual who is enrolled in an education program for the purpose of acquiring academic basic education skills or knowledge. 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, religious schools, 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 end of grade 2.</p> <p>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. If individual students are assessed in more than one language, the grade-2 language of instruction should be used to report against this indicator. When there is more than one language of instruction in a classroom, Missions should report scores from learners' first language.</p> <p>Defining an Increase of at Least One Proficiency Level - Proficiency levels should be defined according to math proficiency standards set by host country governments, preferably aligned with international standards. They should be tailored to the language, context, and assessment utilized. USAID has developed global standards for proficiency in math skills in correlation with the UNESCO Institute of Statistics. These standards include four levels - "does not meet proficiency standards," "partially meets proficiency standards," "meets minimum proficiency standards," and "exceeds minimum proficiency standards." More detail on how each of these levels is defined is available here, and a corresponding toolkit that countries and Operating Units (OUs) 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. OUs are strongly encouraged to work with host-country governments to set internationally linked benchmarks either using the toolkit above or through a statistical linking process (more information is available from USAID's Office of Education on the use of statistical linking; note, however, that statistical linking is much more resource-intensive than the methodology--policy linking--proposed in the above toolkit).</p> <p>An increase of at least one proficiency level in math means that a learner must, at a minimum, move from the "does not meet" category to the "partially meets"</p>

category, from the “partially meets” category to the “meets” category, from the “meets” category to the “exceeds” category. A learner moving more than one level, e.g., from “does not meet” to “meets” would still be counted only once for this indicator.

If countries have not yet set internationally linked benchmarks across these four levels, OUs can 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, OUs should justify how they are determining a shift in a level of proficiency in the indicator narrative. A common 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, ***OUs must report in the narrative for this indicator whether the numbers they are reporting under this indicator are based on internationally linked benchmarks***, country-level benchmarks not linked with international standards, or the 80 percent metric offered as a third-best option, as this information will be reported to Congress to provide a sense of the quality and comparability of numbers reported under this indicator.

Sampling Learners - When assessing learners, it is not necessary to take a census of all learners targeted to receive a USG education intervention. Rather, a statistical sample that is representative of the beneficiary population and is also representative of required sub-populations (denoted under the disaggregation section below) is adequate as long as results are weighted, if necessary, to extrapolate findings to the entire intervention population and sub-populations.

Cohort versus Panel Studies - OUs can choose whether to use a cohort sampling method (sampling different populations of grade 2 learners over time) or a panel sampling method (taking a sample of learners for a baseline at the beginning of grade 2 and then sampling those same learners at the end of grade 2). If an OU chooses to use a cohort approach, the OU should assess learners at the same time in the school year (as close to the end of the school year as possible). Note that when a cohort approach is chosen, OUs will simply report changes in the percentage of learners falling into the “does not meet” category over time since individual learners will not be tracked. See the two examples in the below table:

Level	Baseline	Midline	Reported change
Does not meet minimum proficiency standards	50	40	10 percentage points
Does not meet	40	60	-20 percentage

minimum proficiency standards			points
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If an OU chooses a panel approach, learners should be assessed at the beginning and end of the school year. However, note that if an OU uses a panel approach, it must also have a control group of learners who do not receive the intervention so that the effects of the intervention can be separated from the effects of a typical year of schooling.

Defining 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; Education Management Information System (EMIS) strengthening; etc.

Defining the Baseline Numerator and Denominator Values - OUs must conduct a baseline at the beginning of an intervention to report against this indicator. However, at baseline of a USG intervention, the numerator and denominator 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.

Defining Values in Non-Baseline Years - After at least one year of one or more USG math intervention(s), OUs should report the percent of learners with an increase of at least one proficiency level in math at the end of grade 2 (with corresponding disaggregates, including numerators and denominators). If an OU has multiple activities targeting math outcomes that work in different populations or different parts of the country, the OU should add the numerators for the interventions together and add the denominators together before calculating the total percent of learners with an increase of at least one proficiency level in math at the end of grade 2 with USG assistance. If two or more interventions are working in the same areas, OUs should work to ensure beneficiaries are not 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

	<p>(however, one individual could be reported as having increased at least one proficiency level in both math and reading or under this indicator and under ES.1-X).</p> <p>Calculating the Numerator in Non-Baseline Years - The numerator should be calculated by subtracting midline scores from baseline scores for the “does not meet” category AND/OR subtracting baseline scores from midline scores for the sum of all categories from “partially meets” to “exceeds.” See the table above for examples of subtracting midlines scores from baseline scores.</p> <p>Calculating the Denominator in Non-Baseline Years - Learners should be counted in the total (denominator) if they both are enrolled in the last year of primary or the non-formal equivalent (as defined above) and they are targeted to receive USG education assistance designed to improve math outcomes specifically or learning outcomes more generally, in line with the examples provided above. When there are differences between the denominators at baseline and midline or endline, the latter denominator should be used.</p>
Primary SPS Linkage	ES.1
Linkage to Long-Term Outcome or Impact	<p>This indicator helps to measure progress toward the long-term outcome of proficiency in math. Many countries perform fairly poorly on indicator ES.1-X, 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.</p> <p>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.</p>
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 2018 US Government Strategy and 2018 USAID Education Policy to Congress. 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). This indicator replaces USAID’s separate data call and analysis sometimes referred to as “the count.”
Reporting Frequency	OUs should 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 3 years, etc.
Data Source	<ul style="list-style-type: none"> • 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, EGRAs, ASER, or other leveled math assessments in USG activity areas • Analysis of secondary data on math outcomes (e.g. ASER, EGRA), in so long as the data align with USG activity areas and targeted beneficiaries
Bureau Owner(s)	Agency: USAID Bureau and Office: E3/ED POC: Steve Kowal, Division Chief for Policy and Planning, Office of Education, 1-202-712-4001 skowal@usaid.gov
Disaggregate(s)	<ul style="list-style-type: none"> - Percent of male learners with an increase of at least one proficiency level in math at the end of grade 2 with USG assistance¹ - Percent of female learners with an increase of at least one proficiency level in math at the end of grade 2 with USG assistance¹ - Numerator (number of female learners with an increase of at least one proficiency level)¹ - Denominator (total targeted female learners)¹ - Numerator (number of male learners with an increase of at least one proficiency level)¹ - Denominator (total targeted male learners)¹ - Percent of males with a disability with an increase of at least one proficiency level² - Percent of females with a disability with an increase of at least one proficiency level² - Numerator (number of female learners with a disability with an increase of at least one proficiency level)² - Denominator (total targeted female learners with a disability with an increase of at least one proficiency level)² - Numerator (number of male learners with a disability with an increase of at least one proficiency level)² - Denominator (total targeted male learners with a disability)² - Percent of individuals/learners affected by conflict or crisis with an increase of at least one proficiency level³ - Numerator (number of learners affected by crisis or conflict with an increase of at least one proficiency level)³ - Denominator (total targeted learners affected by crisis or conflict)³ <p>¹All USG interventions reporting on this indicator MUST report on the sex</p>

disaggregates. Numerators should be based on a census or a representative sample of boys and a census or representative sample of girls that is weighted and extrapolated to project total beneficiaries based on activity population numbers; the population of intended male beneficiaries should be reported for the denominator for males and the population of intended female beneficiaries should be reported for the denominator for females.

²The 2018 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 include individuals with a disability as the target population or a target sub-population should report on disability disaggregates, and those that do are required to report on these disaggregates. Those that rely on a sample of learners rather than a census to report results should sample to ensure representation of individuals with disabilities. Activities, such as those measured under this indicator, that target individuals under the age of 10 should use an age-appropriate method to identify disability status. Refer to USAID Guidance on How to Collect Data on Disability for more information: <https://www.edulinks.org/learning/how-collect-data-disability>

³The USAID Education Policy identifies children and youth affected by crisis and conflict as a critical target population that education investments must serve. Individual OUs make the determination about whether a country, region, community, or population is conflict- or crisis-affected in light of the definitions provided in the policy. Activities should follow OU guidance in determining if a country, region, community, or population is conflict- or crisis-affected.

Activities in which some individuals, communities, or geographic areas are conflict- or crisis-affected are required to report on the crisis and conflict disaggregates. Those activities that rely on a sample rather than a census of learners for data collection should sample to ensure representation of learners in crisis- and conflict-affected areas.