

# Checklist for Setting Targets for Progress in Reducing Learning Poverty and Improving Developmental Reading Subskills<sup>1</sup>

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## Introduction

**The Accelerator Program, launched in late 2020, aims to recognize and support a small, global cohort of governments that exhibit the crucial ingredients in the fight against learning poverty.** These countries demonstrate strong political and financial commitment to reducing learning poverty; interest in increasing schooling rates and willingness to measure and monitor learning outcomes; and readiness to implement large-scale, evidence-based foundational skills interventions. By achieving success at scale, Accelerators can offer inspiration to one another, exchange experiences on what works, and motivate other countries showing how focused action and commitment can lead to quick improvements in the education sector.

The main objective of the Accelerator Program is to reduce learning poverty through focused, evidence-based action and commitment to accountability for results (see Figure 1). The program aims to demonstrate that with support and specific evidence-based interventions, it is possible for countries to increase schooling rates and improve their foundational learning outcomes within a 3-5-year period. At the country level, the World Bank will work with governments to:

1. Identify critical performance measures (with an emphasis on foundational learning and literacy skills) and set ambitious yet achievable targets.
2. Develop a clear and realistic plan on how to reach the set learning targets.

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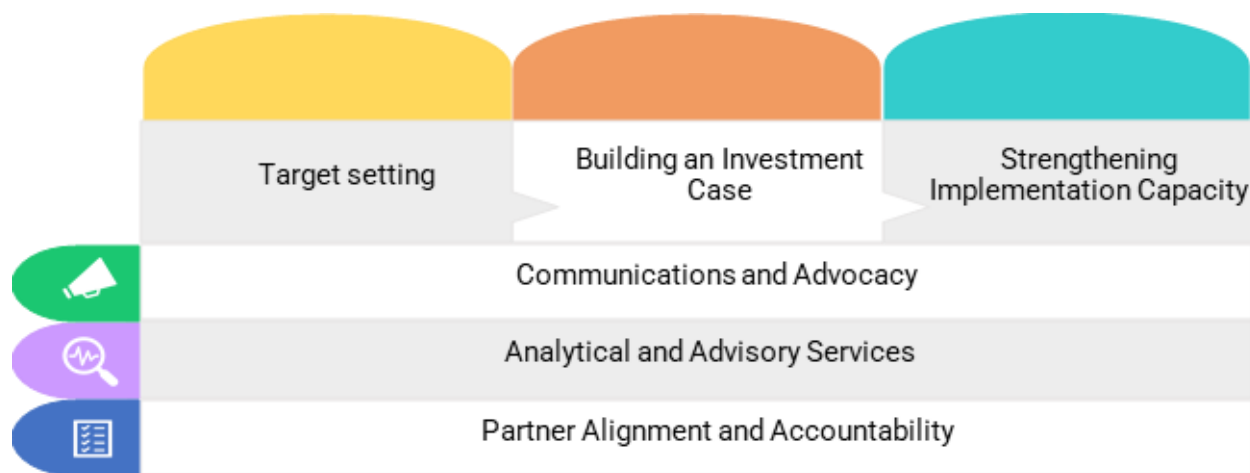
<sup>1</sup> For more details regarding the overall approach please see Azevedo, Crawford et al (2021).

3. Strengthen the governments' capacity to implement the needed programs.

UNICEF will complement this effort and strengthen society-wide commitment and support by engaging in selected countries to:

4. Implement an advocacy campaign to establish, publicize and secure wide-ranging support around government learning targets and programs to increase schooling rates.
5. Make available a range of analytical and advisory services, in the form of global public goods (tools, guides, and technical support), to support governments as they plan and implement; and,
6. Increase partner alignment and accountability by facilitating coordination of donors, civil society (including teacher organizations) and the private sector around the schooling and learning targets, investment case and programming support.

**Figure 1. Core components of the Accelerator program**



In particular, **the target setting component** of the Accelerator program involves identifying a few key schooling and learning outcome indicators related to foundational literacy skills that are easy to communicate and act upon. The suggested approach envisions the development of learning targets on foundational literacy and learning in the early grades of primary school and at the end of primary school. Countries will define the key schooling and learning outcome indicators that collective efforts hope to move and establish systems to monitor progress for these key learning outcome indicators over time. Focusing the government and education stakeholders on a small set of bold but feasible to achieve schooling increase rates and learning outcome indicators is one source of potential acceleration. As final output of this activity, learning targets and activities to monitor learning poverty will be established by governments.

This document answers some key questions on the process of setting schooling and learning targets and monitoring learning outcomes for the improvement of education systems. In addition to providing answers to frequently asked questions, the document includes additional guidance—a checklist for target-setting activities, country case, and the definition of the global Learning Poverty indicator introduced by the World Bank and UNESCO Institute for Statistics (UIS) to monitor global learning outcomes.

## Question 1. What is Target-Setting? What is its purpose?

As part of education sector national plans, countries commonly set goals for their education systems based on their priorities and needs. In some instances, these goals are also reflected in the objectives of World Bank education projects. These goals are typically focused on attainable aspects such as increases in schooling rates, decreases in dropout rates, and school retention rates. More and more, countries are also prioritizing **quality improvements measured in terms of increases in student learning outcomes over time** or increases in educational access and learning improvements for specific subgroups of the student population.

**Policymakers can set schooling and learning targets and implement policies to regularly monitor learning indicators linked to the achievement of these national goals for their education systems.** This dual strategy—setting learning targets and monitoring learning outcomes—requires establishing and strengthening system-level learning assessments. Without the information produced by regular learning assessment at the system level and tracking of schooling rates, policymakers are flying blind: they will not know whether the education system is progressing toward the achievement of these goals and where actions need to be taken to address the needs of students and schools.

**A good learning target is one that identifies an ambitious yet attainable level of proficiency for students, aligned to what they are expected to know, understand, and be able to do as they progress through the education system** (see Box 1). The learning target can be focused on a specific school grade, subject, or skills (e.g., literacy or numeracy), depending on the system priorities and availability of (current or planned) system-level assessments of student achievement. Given the emphasis of the accelerator project on the acquisition and strengthening of foundational literacy skills, targeted learning targets and indicators are suggested for foundational reading subskills in early grades of primary school and literacy skills at the end of primary school. In addition to learning targets, policymakers may also ensure to promote increases in schooling rates, attendance rates, and reduction of dropout as additional targets for their education systems.

### Box 1. Key characteristics of a learning target

A national learning strategy should be centered around **bold, clear, measurable, feasible, yet focused set of goals for the education system and associated learning targets.**

- **Bold** – Targets that challenge the business-as-usual approach in the education system.
- **Clear** – Targets are easy to communicate and act upon.
- **Measurable** – Progress over time towards achieving the target can be monitored with the use of system-level learning assessments.
- **Feasible** – While ambitious, the target must be realistic and feasible to be accomplished within a timeframe.
- **Focused** – Rather than a broad set of goals to achieve, emphasis should be concentrated on a narrow set of foundational learning outcomes.

## Question 2. What are the inputs of target setting?

Three key elements are needed for a learning target to successfully motivate improvements in an education system: political willingness and social awareness about the learning challenges, baseline information on student schooling rates and learning outcomes, and a context that enables system-wide monitoring of learning.

**Political willingness** refers to the level of commitment of political leaders to promote positive changes and enhance educational quality. Ministers of education and key decision makers can be champions of bold reforms and initiatives to improve schooling and learning, particularly when they confront the business-as-usual governance and practices with innovations backed by evidence. Leaders in the education system must also be able to bring along key actors and groups to feel part of any changes and commitments, including the establishment of goals and learning targets. Achieving a target will likely require social buy-in: **key stakeholder groups (e.g., teachers and teacher unions, researchers, civil society groups, among others) and the broader society must be aware of the challenges within the education system** and motivated to take them on. To promote engagement around the schooling and learning target, the leadership within the Ministry of Education may engage in consultations with stakeholder groups and representatives to understand their perspectives and promote ownership in this process.

In addition to this enabling political and social context, **baseline information** about the status of the education system must be available, so that policymakers can understand where students are and how much change could be possible with greater focus on learning. **This information is usually produced by system-level learning assessment studies focused on determining what students within an education system know, understand, and can do** (see Box 2). Countries with no recent system-level assessments to provide this information need to implement a baseline study and follow it with subsequent assessment rounds to monitor progress over time. Countries that already have information from one or more system-level learning assessments have to select a specific baseline measure to use for setting a learning indicator and monitoring progress over time. In addition to learning data, complementary baseline information may come from school census data or household survey data to understand who is and who is not enrolled in the formal education system.

In addition to initial information from system-level assessment studies and to prevent assessments that are a one-off activity, **the education system must have an enabling context for monitoring learning over time**. This enabling context includes factors such as the availability of resources (including financial, human, and time resources) allocated for assessment activities; existence of regulations, policies, and institutions within the education system that carry out system-level assessments; and coherence and alignment between the learning assessments and the broader education system (e.g., curriculum and learning standards, teaching and learning materials, and policies around teacher professional development).

## Question 3. What is the sequence to establish learning targets?

The **learning poverty indicator**, which measures the proportion of children in an education system that cannot read and understand a simple text by the age of 10, can be one learning indicator used in setting

learning targets. The learning poverty indicator brings together schooling and learning indicators in an easy-to-understand index: it combines the share of primary-aged children out-of-school who are **schooling-deprived** and the percentage of pupils below a minimum proficiency in reading, who are **learning-deprived**. By combining schooling and learning, the indicator brings into focus both "*more schooling*," which serves a variety of critical functions that aren't captured by learning measurement, and "*better learning*," which is important to ensure that time spent in school actually translates into the acquisition of skills and capabilities (see Annex 1 for more information about the formula behind this learning indicator).

### **Box 2. Key types of system-level learning assessment for setting baseline learning target indicators**

A system-level large-scale assessment is defined as an assessment study that provides information on overall performance levels and trends in the education system and is used to be an aid to policy decision-making (Clarke & Luna Bazaldua, 2021). These assessments measure learning contents of specific subjects or skills (e.g., literacy or numeracy). System-level assessments can be administered either to all students (in a censal assessment) or to a representative random sample of students in a particular school grade or age.

In the context of the Accelerator project, the focus of system-level large-scale assessments is centered around priority knowledge related to foundational literacy skills in the early grades of primary school and at the end of primary school. In this context, several types of system-level large-scale assessments could be used to set learning target indicators for literacy skills:

1. National large-scale assessments.
2. Regional or international large-scale assessments.
3. System-level representative citizen-led assessments.
4. System-level representative Early Grade Reading Assessments (EGRA) and Early Grade Mathematics Assessments (EGMA).
5. System-level representative assessments included in household survey studies.

It is important to start setting learning targets building on what learning assessment activities already exist in the country. Moreover, the learning contents and skills measured by these assessments should be consistent with the broader set of interventions in place to improve the quality of the education system.

*See the references and annex 2 at the end of this document for more resources and information on system-level learning assessments to measure student learning outcomes and monitor progress over time. See annex 3 for a summary of foundational literacy skills.*

To reduce **learning poverty**, countries should also consider targets for improving the **foundational literacy sub-skills** necessary to read fluently with comprehension: the ability to hear and produce sounds of words, to listen and comprehend to a spoken passage, to identify letters and link letters with sounds, to identify and read words, and to read and comprehend simple sentences and short passages. Because **learning poverty** is also directly linked to schooling rates, country targets can also focus on

increase enrollment of girls and boys, decreasing dropout rates, increasing access to school, and improving the monitoring of school attendance.

**The checklist included below describes the main stages in setting a learning target, once system-level assessment information on student achievement is available.** Steps that are considered to be necessary for the target-setting process are identified as "*necessary*." In contrast, those that can enhance the target-setting activities but are not essential are identified as "*optional*." Following the checklist is a case example, describing an education system that has accelerated student learning by incorporating learning targets as part of its educational policies and reforms.

**Checklist 1. Stages in setting learning targets**

Activity	Check
<p><b>1. Understand where you stand</b></p> <p><b>1.1.a Identify available system-level data of the proportion of out-of-school children (i.e., schooling). [Necessary]</b></p> <p>Information about the proportion of out-of-school children is usually available in data sets from the National Statistical Office or the Ministry of Education.</p> <p><b>1.1.b Identify available system-level student assessment results to determine baseline achievement in reading. [Necessary]</b></p> <p>Depending on the maturity of the assessment system, available student assessment data may come from national large-scale assessments, regional and international large-scale assessments, system-level implementation of Early Grade Reading Assessment (EGRA) studies, citizen-led assessments studies, or other system-level studies of student learning. Ideally, these assessments should have been implemented within the last five years.</p> <p><b>1.1.c Identify existing learning targets. [Necessary]</b></p> <p>Countries may set targets to improve their education systems. It is important to document existing targets, their relationship with learning poverty and foundational reading skills, and the feasibility of reaching these targets.</p> <p>If no data or indicators exist for a country, data from similar countries can be used and combined with the tacit understanding of the country’s specific context to generate insights and targets.</p>	<p>[ ]</p>
<p><b>1.2. Use existing assessment results to map out the distribution of student achievement. [Necessary]</b></p> <p>This information must be organized by school grade to allow a good understanding of achievement and learning progression. The information may be expressed in terms of raw scores, scaled test scores, proficiency levels, scores by foundational reading subskills, and achievement trends by key subgroups of students (e.g., girls and boys).</p> <p>If information from more than one system-level assessment is available, identify common patterns and factors that may explain student performance (e.g., language of instruction, language of assessment, individual and school factors).</p>	<p>[ ]</p>

<p><b>1.3. Select results that could be used as a baseline for the target-setting. [Necessary]</b></p> <p>To measure baselines, prioritize student outcomes from national large-scale assessments if they are available. If not, then use results from regional or international large-scale assessments. If the country does not participate in any of these large-scale assessment programs, select other system-level assessment tools (e.g., EGRA, citizen-led assessments, learning assessments embedded in household surveys) that can be implemented to monitor learning over time.</p> <p>For early school grades, the most relevant student outcomes for target baselines will likely be the foundational reading subskills measured in system-level assessments: oral language listening comprehension, phonemic awareness, letter-sound recognition, decoding, word recognition, oral reading fluency, and reading comprehension.</p> <p>For end-of-primary school grades, relevant student outcomes for target baselines are those that measure reading fluency and comprehension skills.</p>	<p>[ ]</p>
<p><b>1.4.a Produce initial baseline estimates of learning poverty or the desired learning target. [Necessary]</b></p> <p>Calculate a system-level learning poverty estimate, by using a national schooling deprivation indicator (i.e., the proportion of out-of-school children) and a learning deprivation indicator (obtained from the student outcomes measured by the system-level assessment in step 1.3),.</p> <p><b>1.4.b Compare indicator baseline estimates with any existing targets set by the government. [Optional]</b></p> <p>If the country has other learning targets for their education system already in place, it is possible to compare whether the learning poverty estimate is consistent their targets. For instance, when a government sets the goal of improving literacy rates amongts children in primary school age, the learning poverty indicator can complement this effort by also taking into account the rate of out-of-school children. This information can motivate policymakers and other stakeholders to introduce the learning poverty target as a complementary indicator to their existing national learning target.</p>	<p>[ ]</p>
<p><b>2. Understand what can be done</b></p> <p><b>2.1. Benchmark learning poverty components against those of relevant country comparators. [Necessary, conditional on data availability]</b></p> <p>Student achievement in the country can be benchmarked against that of other countries that are seen as relevant, whether because they are in the same region, income group, or lending classification, or for other reasons. If data for comparison is available, this benchmarking information can be used to assess whether a country should be more ambitious in its target-setting goals.</p>	<p>[ ]</p>
<p><b>2.2. Analyze how different factors will affect learning poverty over time. [Necessary, conditional on data availability]</b></p> <p>To aid in setting a learning target, identify how different factors may impact school deprivation and learning deprivation reduction rates. Influential factors may include inequities in access to school and learning outcomes linked to gender, socioeconomic background, ethnic background and its impact on the language of instruction policies, geographic disparities, population growth, and quality of education service delivery, among others.</p>	<p>[ ]</p>

<p>While this information will not be reflected in the learning poverty estimate, understanding the key factors affecting learning poverty can help guide any theory of change, investment case, and policy decisions to improve education systems. For instance, given the added challenges of becoming literate in a multilingual context, targets may need to be more modest in those settings than in monolingual settings.</p>	
<p><b>3. Build a theory of change</b></p> <p><b>3.1. Identify existing policies and interventions to support the acquisition of reading skills. [Necessary]</b></p> <p>Identify what system-level policies and interventions are planned or currently being implemented to tackle barriers to schooling and improvements in learning outcomes. The coordination with the Investment Case component of the Accelerator project and key policy activities and interventions described in the Literacy Policy Package are crucial to identify where the country is, what can be done, and the overall structure of the theory of change.</p>	[ ]
<p><b>3.2. Produce a theory of change. [Necessary]</b></p> <p>Produce a theory of change that explains how system-level policies and interventions will reduce learning poverty. This theory of change may incorporate information about additional resources and factors that may support or limit the capacity to minimize learning poverty. The theory of change must be actionable.</p> <p><b>3.3. Understand what pathways can be taken using simulations [Optional]</b></p> <p>If data is available, explore through simulations how changes to different factors in the education system can have an impact on learning outcomes. The information from these simulations can help to fine-tune the theory of change from the previous point.</p>	[ ]
<p><b>4. Define clear, measurable, and feasible targets</b></p> <p>The next step of this process is to define learning targets based on the baseline system-level measures of student achievement, the theory of change, and an identified pathway for achieving them in a specified timeframe.</p> <p><b>4.1.a Set learning targets for end-of-primary school targets for reducing learning poverty. [Necessary]</b></p> <p>End-of-primary targets should be related to system-level increases in the share of children enrolled in school and the share of students that can read a grade-level text with comprehension.</p> <p><b>4.1.b Set learning targets for foundational reading subskills. [Necessary]</b></p> <p>Targets for early grades should be related to the acquisition of foundational reading subskills.</p> <p>To be useful, these targets should be feasible to be accomplished—meaning that they should be considerably more ambitious than what would be expected under business as usual, but they should also be feasible to be achieved under some plausible theory of change, given the resources available and the level of commitment.</p>	[ ]
<p><b>5. Monitor learning outcomes over time [Necessary]</b></p>	[ ]



**5.1. Inform stakeholder groups about the learning targets and goals for the education system. [Necessary]**

Because meeting the targets will require concerted efforts of many people—including educators, parents, civil servants, and of course students—it is important to build public awareness of the targets and get buy-in from as many stakeholders as possible once targets have been identified. In fact, in some contexts it will be more effective to start this step earlier in the process, by involving stakeholders in the analysis and target-setting that takes place under Steps 2 through 4.

**5.2. Plan assessments to monitor learning progress over time. [Necessary]**

To ensure progress toward achieving the learning target, implement system-level learning assessments that monitor trends in the mastery of early-grade and end-of-primary skills. Ensure that assessment instruments to be developed are planned and designed with a proportion of common items to the tools used for the baseline target setting to ensure equivalence of scores over time.

**5.3. Link assessments to monitoring the effectiveness of reforms, policies, and interventions implemented to improve the education system. [Necessary]**

System-level assessments to monitor progress should be implemented at least every other year to inform policymakers and other stakeholders about the success of the policies and activities defined in the theory of change to improve the education system.

*See annex 2 for some options of system-level assessments that could be used to set learning targets.*

*See annex 3 for more information on the assessment foundational reading skills.*

## Question 4. After targets are defined, what subsequent activities must be planned and implemented?

Once the process of setting a schooling or learning target has concluded, some additional activities have to be planned and carried out both to disseminate these goals for the education system and learning targets, and to plan and design learning monitoring activities over time.

The goals, schooling and learning targets, and target indicators defined and agreed upon by the leadership in the Ministry of Education must be communicated to the society, with tailored messages for key stakeholder groups and organizations directly impacted by the changes to be made to improve the education system. **The messages should not only describe the schooling and learning targets and activities to achieve it, but also explain what benefits these changes will bring.** The goal of the communication strategy should be to get stakeholders to buy into the targets and goals set by the Ministry of Education; stakeholders should feel included and understand that their participation is necessary to improve the system.

On the technical side related to monitoring progress in the education system, after targets are defined and baseline indicators calculated, **the Ministry of Education and or agencies responsible for designing and implementing system-level learning assessments have to plan subsequent monitoring activities.** The system-level schooling and learning monitoring plan should consider assessments of foundational

literacy skills of students in early primary school grades and reading comprehension skills of students at the end of primary school.

Ideally, system-level learning assessments should be implemented every two to three years to measure progress toward the targets and inform policy adjustments and resource allocation. To allow comparability of results over time, these assessments should adhere to specific assessment design principles—for example, by including a common set of items in tests administered to students in the same grade in two different school calendar years and carrying out the specialized psychometric analyses needed to interpret the data. **Ensuring this temporal comparability in assessment results is critical to inform whether the country is progressing rapidly enough to reach the learning targets.**

Finally, to ensure coherence with the broader set of reforms and interventions aimed at improving education quality, **system-level learning assessments can be used to monitor progress and understand how resources and programs implemented by the government and partners can support student achievement.** However, because of their design and the main objective, there are challenges in the use of system-level assessments to quantify the impact of specific evaluations; at best, these assessments can help to determine if specific programs or interventions are helping the education system to achieve the learning target.

### Case. Setting learning targets in Ceará, Brazil

The case illustrated below focuses on the state of Ceará in Brazil, which improved its education system by implementing a comprehensive set of educational reforms and interventions to support teaching and learning in the classroom. While useful to illustrate the target setting process, it is important to keep in mind that, for the accelerator program in contrast to Ceará, the emphasis is restricted to setting schooling and learning targets and aligning interventions to improve foundational literacy skills in primary school. Moreover, the transferability of this target setting example to other contexts is limited given the different levels of capacity that other countries may have to set targets and effectively monitor learning over time. Finally, the election of the learning target indicator of Ceará may result too complex for other countries, leaving it to local policymakers to decide what is the best indicator to monitor progress for their education systems.

In just over a decade, the relatively poor northeastern state of Ceará transformed its education system and turned itself into one of the top-performing states in Brazil, in terms of learning and access. Ceará did this by putting student learning at the center of its education strategy, emphasizing early literacy for all students as the foundation for learning outcome improvements throughout the education system. As a result of this commitment, education outcomes for schools in Ceará are much higher than we would expect given their socioeconomic context.

To achieve changes in the local education system, the first step was to ensure that the head of the government (in this case, the governor of Ceará) was committed to the education reform and willing to play a decisive leadership role in this effort. To implement the kind of reform seen in Ceará, the head of government must lead the process, because only a person in that position has the ability and legitimacy to place the reform at the top of both education and finance agendas. In addition, support at the

leadership level sends an important message to society about the importance of education to the government administration.

But crucial is it is, leadership is just the start. To achieve the results it did, Ceará needed to set targets that would motivate concrete action to prioritize learning for all children. In doing so, it covered a number of the critical steps discussed above under Step 1:

## 1. Understand where you stand

The first step in establishing changes in the education system of Ceará was to conduct, analyze, and communicate a diagnostic assessment of the local education system to identify student literacy levels and define a reasonable, challenging, and feasible to be achieved target.

### 1.1.a Identify available system-level data of the proportion of out-of-school children (i.e., schooling).

Brazil's National Institute of Educational Studies and Research (INEP) conducts a school census in collaboration with state and municipal education departments nationwide. The information produced by this school census produced fine-grained information regarding the proportion of out-of-school children in each municipality and by education level.

### 1.1.b Identify available system-level student assessment results to determine baseline achievement in reading.

Aligned with the steps proposed here, in Ceará, the first step in setting learning targets was to gather information on the strengths and weaknesses of the municipal-level education systems within the state. Here too, it benefited from good data that were already available. At the national level, Brazil implements national large-scale assessments of student achievement (*Avaliação Nacional do Rendimento Escolar*, ANRESC), and participates in regional (*Laboratorio Latinoamericano de Evaluación de la Calidad de la Educación*, LLECE) and international (Programme for International Student Assessment, PISA) large-scale assessments that provide information on learning and some of its correlates. All these assessments provided critical inputs on the status of the national education system in Brazil. Nevertheless, they still had some limitations as inputs for state-level learning targets in Ceará:

- **Timing.** ANRESC is implemented only every other year nationwide. PISA is administered every three years, and LLECE every six years on average. Policymakers in Ceará wanted a source of state-level information that could provide more frequent feedback on the effectiveness of their system-level reforms and interventions.
- **School grade coverage.** ANRESC is focused on upper grades of primary and secondary education, PISA covers 15-year-old students, and LLECE is focused on students in grades 3 and 6. Policymakers in Ceará were in need of additional information regarding the readings skills of students in the early grades of primary school, particularly given that this is a critical time to acquire and strengthen foundational literacy skills necessary for better achievement later in primary and secondary school.
- **Sampling.** ANRESC is a census-based assessment, whereas LLECE and PISA are sample-based. Local policymakers in Ceará were interested in designing a census-based learning assessment to monitor learning levels of all children with the capacity to be implemented more frequently than ANRESC.

All these design properties of the national and cross-national assessments in Brazil motivated policymakers in Ceará to introduce an additional state-level large-scale assessment program to complement national and international initiatives with local tools that could produce timely information on the literacy skills that students had mastered in early grades.

Because of the decentralization of the education system within the country, the State Secretary of Education (SEDUC) in Ceará was able to develop a **state-level literacy assessment** that complemented ANRESC, one that would allow them to monitor more frequently the reading proficiency levels and inequalities in learning within the local education system and the schools in the state. In 2004, after reviewing the city of Sobral's experience with conducting learning assessments at the municipal level, Ceará created the Ceará Committee for the Elimination of School Illiteracy to conduct state-level literacy assessments in other municipalities within the state. In 2007, the new state administration took over the implementation of the program, expanding it to the whole state. Because the assessment was planned and administered by an entity that was external to the municipal education systems and schools, this new assessment generated more accurate, comparable results and mitigated the risks of testing malpractice.

### **1.1.c Identify existing learning targets.**

At the national level, Brazil has used its Basic Education Development Index (IDEB) since 2005 to monitor progress toward the achievement of the country's education goals. IDEB merges in a single indicator the school enrollment rates and the average student performance on the national large-scale ANRESC assessment. IDEB scores range from 0 to 10, and lower IDEB scores identify where municipalities and states are having trouble keeping students in school and providing them with quality education. Moreover, IDEB scores also give governments detailed information for making decisions on how to improve the system quality. Because the national large-scale assessment takes place every other year, IDEB is reported on a biennial basis. While IDEB was a starting point for understanding the status of education in Ceará, until recently other Brazilian states and municipalities have used IDEB to set local learning targets.

IDEB also helps state and municipal governments to know their progress toward Brazil's national learning target, which states that **by the year 2022, Brazil is expected to reach an average IDEB score of 6. A score of 6 would indicate that the education system has reached a quality level comparable to that of developed countries.**

This national-level indicator of educational progress and national learning target were relevant for Ceará, as they helped to motivate the educational reforms and interventions to improve its education system. In addition, the implementation of state-level assessments provided additional timely information for setting local learning targets for the early grades of primary school and driving improvements in their system. Some of the key questions that Ceará's state-level assessment answered were:

- *What is the current level of literacy for each student, including at the end of 2<sup>nd</sup> grade?*
- *Which local education systems and schools have the highest and lowest learning levels?*
- *Which local education systems and schools have the highest and lowest rates of learning inequality among their students?*

## 1.2. Distill information from existing assessment results regarding the distribution of student achievement.

### 1.3. Select results that can be used as a potential baseline for the target-setting.

Existing results from these assessments gave Ceará policymakers clear insights into the patterns of student learning and provided baselines for target-setting. When the IDEB index was first published in 2005, the average IDEB national score for Brazil in the first years of primary school was 3.8 out of 10. Ceará's average IDEB score in early primary school grades was 3.2, well below the national average. By 2019, the national average IDEB indicator had risen to 5.9 out of 10, close to the national learning target of 6.0 for the year 2022; but at the state level, Ceará had reached an average IDEB score of 6.4. By 2019, therefore, Ceará had already well exceeded the national learning target for 2022, and its accelerated educational progress had brought it above the national average and the scores of most states. See table 1 for the changes in IDEB scores at the national and state levels over time.

**Table 1. Changes in grade 5 national learning target (IDEB) for Brazil and the state of Ceará**

	Average IDEB scores by year							
	2005	2007	2009	2011	2013	2015	2017	2019
Brazil	3.8	4.2	4.6	5.0	5.2	5.5	5.8	5.9
Ceará	3.2	3.8	4.4	4.9	5.2	5.9	6.2	6.4

Having this national learning target in 2005 gave Ceará insights into how its students performed relative to their peers in other Brazilian states. This national learning target, and the assessment used to track progress toward it, was complemented with data produced by the state-level literacy assessments conducted in all municipalities of Ceará.

### 1.3. Select results that can be used as a potential baseline for the target setting.

#### 1.4.a Produce baseline estimates.

The state-level literacy skills assessment pilot that started in 2004 in some municipalities in Ceará revealed the need for a systematic approach to achieving universal literacy. In 2007, Ceará's SEDUC implemented the first annual census-based assessment of literacy skills of students in grade 2 through their Permanent Assessment System for Basic Education (SPAECE Alfa). This early grade literacy assessment provided a baseline measure for Ceará's Literacy Program at the Right Age (PAIC). The results of this assessment showed that, on a proficiency scale from 0 to 200 points, the average reading proficiency was 127 points in 2007; since then, average proficiency has increased over time (to 191 points in 2019) due to the effective implementation of initiatives to improve the public school system in Ceará (see Table 2).

**Table 2. Average grade 2 SPAECE Alfa scores for the state of Ceará**

Average SPAECE Alfa scores by year												
	2007	2008	2009	2010	2012	2013	2014	2015	2016	2017	2018	2019
<b>Ceará</b>	126.5	137.9	144.8	145.3	162.0	151.7	157.4	160.0	166.6	185.4	179.3	191.2

The assessment results from 2007 were one of the inputs for the state learning target and state learning target indicator.

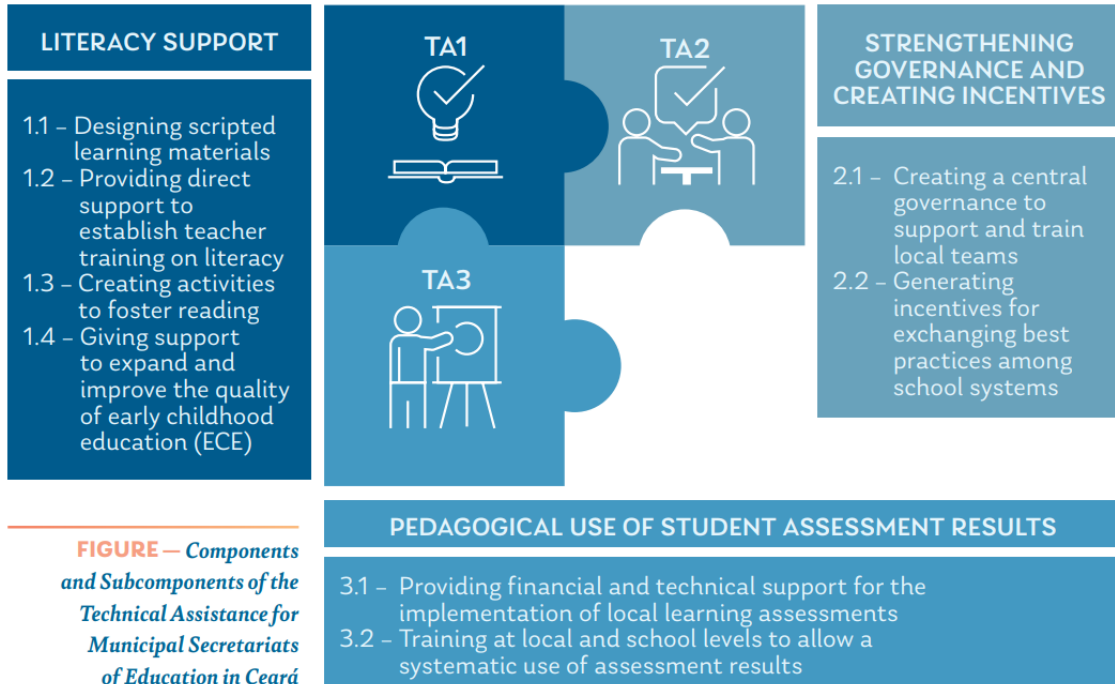
#### **1.4.b Compare learning baseline estimates with any existing targets set by the government.**

As shown in Tables 1 and 2, **the State of Ceará showed that it is possible to increase the percentage of grade 2 students who are literate over time.** The state's own measures tracked closely with the national metric used for assessing progress toward the national goal. First, in 2007 the initial results in SPAECE Alfa were consistent with Ceará's relative performance on the national learning indicator IDEB, which positioned the state below the country's average performance. The most recent IDEB results, from 2019, confirm the state's findings that Ceará has improved the local education system by nearly eradicating illiteracy, and they show that Ceará is now outperforming most states in Brazil.

#### **How were the baseline assessment results and learning target used to improve the education system?**

The baseline measurement from 2007 was an initial input to diagnose the state and municipal education systems' status, helped the government answer critical questions and identify needs to be addressed in the system, define learning goals, and plan reforms to eradicate illiteracy in Ceará. Based on these results, the state government of Ceará provided technical assistance to the municipal secretariats of education in three main pillars:

1. Providing literacy support to the municipalities.
2. Strengthening the governance of municipal secretariats of education and providing incentives to promote the exchange of best pedagogical practices.
3. Promoting the pedagogical use of student assessment results.



**FIGURE** – *Components and Subcomponents of the Technical Assistance for Municipal Secretariats of Education in Ceará*

## References

### **For more information about the setting targets, review:**

- Azevedo, J.P., Crawford, M., Carnelli, M., & Goldemberg, D. (2021). *Setting Targets for Progress in Reducing Learning Poverty and Improving Developmental Reading Subskills: Towards an Evidence-Based Strategy to Accelerate Learning*. Washington, D.C.: World Bank.
- Crouch, L. (2020). [\*Systems Implications for Core Instructional Support Lessons from Sobral \(Brazil\), Puebla \(Mexico\), and Kenya\*](#). RISE Insight Series. 2020/020.
- UNESCO Institute for Statistics (n.d.). [\*Benchmarks for SDG 4 indicators: A political and technical basis for discussion\*](#). Montreal, Canada: UIS.
- UNESCO Institute for Statistics (2021). [\*SDG 4 Benchmarks A common framework of global, regional and national priorities to improve education program quality, efficiency & impact to improve education program quality\*](#). Montreal, Canada: UIS.
- World Bank. [Dashboard and data visualization for School Enrollment by country](#).
- World Bank. [Accelerator Target Setting Resources](#).

### **For more information about the improvements in the education system of the state of Ceará, Brazil, review:**

- Cruz, L., & Loureiro, A. (2020). [\*Achieving World-Class Education in Adverse Socioeconomic Conditions: The Case of Sobral in Brazil\*](#). Washington, D.C.: World Bank.
- Holanda, M., Barbosa, M., Cruz, L., & Loureiro, A. (2020). [\*Implementing a Results-Based Financing Mechanism for Subnational Governments to Improve Education Outcomes: An Implementation Guide Inspired by the Case of Ceará, Brazil\*](#). Washington, D.C.: World Bank.
- Loureiro, A., Cruz, L., Lautharte, I., & Evans, D. K. (2020). [\*The State of Ceará in Brazil is a Role Model for Reducing Learning Poverty\*](#). Washington, D.C.: World Bank.
- World Bank (n.d.). [\*Getting Education Right. State and Municipal Success in Reform for Universal Literacy in Brazil\*](#). Washington, D.C.: World Bank.
- World Bank (n.d.). [\*From Bad to Best. How One State and One Municipality in Brazil Are Eradicating Illiteracy and Innumeracy\*](#). Washington, D.C.: World Bank.

### **For more information about the Literacy Policy Package and Learning Poverty, review:**

- Azevedo, J.P. (2020). [\*Learning Poverty: Measures and Simulations. Policy Research working 9446\*](#). Washington, D.C.: World Bank Group.



Azevedo, J.P. (2020). [Learning Poverty in the Time of COVID-19 : A Crisis Within a Crisis](#). Washington, D.C.: World Bank Group.

Azevedo, J.P., Amer, H., Goldemberg, D., Syedah, I. A., Koen, G. M. (2020). [Simulating the Potential Impacts of COVID-19 School Closures on Schooling and Learning Outcomes: A Set of Global Estimates. Policy Research working paper 9284](#). Washington, D.C.: World Bank Group.

Azevedo, João Pedro, Diana Goldemberg, Silvia Montoya, Reema Nayar, Halsey Rogers, Jaime Saavedra, and Brian William Stacy. 2021. [Will Every Child Be Able to Read by 2030? Defining Learning Poverty and Mapping the Dimensions of the Challenge](#). Policy Research Working Paper No. 9588. Washington, D.C.: World Bank Group.

World Bank. (2019). [Ending Learning Poverty: What Will It Take?](#) Washington, D.C.: World Bank.

**For more information about large-scale assessments of student achievement, review:**

Anderson, P., & Morgan, G. (2008). [National Assessments of Educational Achievement, Volume 2: Developing Tests and Questionnaires for a National Assessment of Educational Achievement](#). Washington, DC: World Bank.

Clarke, M. (2012). [What Matters Most For Student Assessment Systems: A Framework Paper](#). World Bank, Washington, DC.

Clarke, M., & Luna Bazaldua, D. (2021). [Primer on Large-Scale Assessments of Educational Achievement](#). Washington, DC: World Bank.

Greaney, V., & Kellaghan, T. (2008). [National Assessments of Educational Achievement, Volume 1: Assessing National Achievement Levels in Education](#). Washington, DC: World Bank.

Greaney, V., & Kellaghan, T. (2012). [National Assessments of Educational Achievement, Volume 3: Implementing a National Assessment of Educational Achievement](#). Washington, DC: World Bank

Kellaghan, T., Greaney, V., & Murray, S. (2009). [National Assessments of Educational Achievement, Volume 5: Using the Results of a National Assessment of Educational Achievement](#). Washington, DC: World Bank.

Shiel, G., & Cartwright, F. (2015). [National Assessments of Educational Achievement, Volume 4: Analyzing Data from a National Assessment of Educational Achievement](#). Washington, DC: World Bank.

## Annex 1: Formula for the Learning Poverty indicator

The learning poverty indicator brings together schooling and learning indicators: it combines the share of primary-aged children out-of-school who are **schooling deprived (SD)**, and the share of pupils below a minimum proficiency in reading, who are **learning deprived (LD)**. By combining schooling and learning, the indicator brings into focus both "more schooling", which by itself serves a variety of critical functions, as well as "better learning" which is important to ensure that time spent in school actually translates into acquisition of skills and capabilities.

The learning poverty indicator is calculated as follows:

$$LP = [LD * (1 - SD)] + [1 * SD]$$

**LP:** Learning poverty

**LD:** Learning deprivation, defined as the share of children at the end of primary who read at below the minimum proficiency level, as defined by the Global Alliance to Monitor Learning (GAML) in the context of the SDG 4.1.1 monitoring.

**SD:** Schooling deprivation, defined as the share of primary-aged children who are out-of-school. All out-of-school children are assumed to be below the minimum proficiency level in reading.

By construction, learning poverty can be improved in two key ways: (i) by reducing learning deprivation as countries raise proficiency levels for children below the minimum proficiency threshold, or (ii) by reducing schooling deprivation as countries expand coverage and bringing out-of-school population into the system.

While schooling deprivation can be directly observed depending on whether the child is enrolled or not enrolled in school, learning deprivation cannot be directly observed, and is measured through standardized assessments using SDG's definition of minimum proficiency level, where reading proficiency is defined as:

*"Students independently and fluently read simple, short narrative and expository texts. They locate explicitly-stated information. They interpret and give some explanations about the key ideas in these texts. They provide simple, personal opinions or judgements about the information, events and characters in a text."* (UIS and GAML, 2019)

## Annex 2: System-level large-scale assessments to set learning targets and their key differences.

The table below shows a list of system-level large-scale assessment activities to monitor learning outcomes. In the context of the accelerator project, the priority is on learning assessments of foundational literacy skills in early primary school grades and at the end of primary school. Therefore, some international and citizen-led assessments focused on numeracy skills, mathematics, or science may not be aligned in content to the literacy skills here discussed.

	<b>National</b>	<b>International</b>	<b>Citizen led</b>	<b>EGRA and EGMA</b>
<b>Purpose</b>	Provide feedback on overall health of system at particular grade or age level(s)	Provide feedback on comparative performance of education system at particular grade or age level(s)	Report on foundational literacy and numeracy skills of children in household settings	Report on foundational literacy and numeracy skills of children in school or household settings
<b>Frequency</b>	For individual subjects offered on regular basis (for example every one to five years)	For individual subjects offered on regular basis (for example every three to five years)	Varies	Usually one-off exercises; sometimes used as baseline and follow-up for specific interventions
<b>Who is tested?</b>	Sample or census of students at particular grade or age level(s)	Sample of students at particular grade or age level(s)	In- and out-of-school children	Varies, typically students in grades 1 to 3
<b>Format</b>	Usually multiple choice and short answer	Usually multiple choice and short answer	Usually multiple choice and short answer questions administered one-to-one or included in household surveys	Oral, one-on-one administration of short-answer questions
<b>Coverage of curriculum</b>	Generally confined to a few subjects	Generally confined to one to three subjects	Focused on foundational skills that may or may not be aligned with curriculum	Focused on foundational skills that may or may not be aligned with curriculum
<b>Additional information collected from students?</b>	Frequently	Yes	Sometimes	Sometimes
<b>Scoring</b>	Varies from simple to statistically sophisticated techniques	Usually involves statistically sophisticated techniques	Varies from simple to statistically sophisticated techniques	Simple aggregation of number or percentage correct for individual items

Source: Clarke & Luna Bazaldua 2021.

### Annex 3: Assessment of foundational literacy skills.

The assessment of foundational literacy skills refers to the set of activities that allow different stakeholders to know students' mastery of basic skills that, once acquired, will enable them to read a text with fluency and comprehension. Because the acquisition of these basic literacy skills in school follows a specific trajectory, it is important for assessment activities to reflect this trajectory in order to provide accurate information on the skills students have mastered and those that require further practice.

Early Grade Reading (EGR) skills are the foundational literacy skills acquired as part of the learning trajectory to support stronger reading ability as students transition from initial to end of primary school grades. EGR skills are acquired when children go through a formal learning process that usually occurs at school. EGR skills are cumulative and follow a specific learning trajectory. These two properties imply that students need to master the most fundamental EGR skills before learning the more complex ones. Literacy curriculum specialists have organized these skills in progressive and coherent learning trajectories usually reflected in preschool and primary school curricula. Consequently, EGR assessment needs to be aligned to the curriculum and reflect this progression, starting with tasks linked to more basic skills and concluding with tasks in which students read fluently and comprehend information in a passage.

A marker of success for students is the ability to read and understand a written passage and use the acquired information to solve new tasks and problems. Therefore, reading proficiency is regarded as a gateway to learning in other school subject areas. Without fundamental reading skills, children often tend to fall behind in school, drop out of school, and fail to succeed in later years of school (World Bank, 2019).

EGR skills start with those linked to students' oral language comprehension, followed by their concept of print and others that will ultimately allow them to read fluently with comprehension (Moats, 2000; Evans et al., 2019). While children develop these EGR skills at different speeds, they will read with comprehension after going through four sequential developmental reading and writing phases: pre-alphabetic, early alphabetic, late alphabetic, and full orthographic phase. To be mapped within a curriculum, these EGR skills must be aligned to instructional goals; these goals indicate the observable behaviors that students need to demonstrate as a result of instruction. These behaviors, in turn, can be assessed as part of the classroom practice. The table below presents these four phases aligned with the EGR skills and instructional goals.

**Table 2: Foundational literacy skills for stronger reading ability aligned with sequential reading phases**

Phases	EGR skills with Instructional Goals	Skill assessment
<p><b>Pre-Alphabetic:</b> Young children improve control of the oral language, start to recognize rhymes and songs, and depend heavily on pictures and rely on context in which words occur to support their initial understanding of letters and words.</p>	<p><b>Concept of print</b> includes knowledge of how print and books work, correct orientation of a book, text direction, identification of illustrations, cover page, lower- and upper-case letters, and other aspects of printed language and communication</p>	<p>This skill is assessed by determining if the child understands the concept of a book, the idea of the directionality of text, and other mechanical features such as spacing and punctuation.</p>
	<p><b>Oral language comprehension</b> is the ability to understand the usage of oral language. The child should learn words at home and at school. The child also should learn how words describe the world.</p>	<p>This skill is assessed by determining if the child can understand basic oral vocabulary and is able to respond to questions about a text read to them.</p>
	<p><b>Phonemic Awareness</b> refers to the ability to hear, classify, and manipulate words and sounds in oral language.</p>	<p>This skill is assessed by determining if the child understands how letters represent sounds. A child should be aware of speech sounds such as rhyming, alliteration, syllables within words, and identify the beginning and ending sounds within words. Phonemic Awareness is auditory and does not involve words in print.</p>
<p><b>Early-alphabetic:</b> Children start to grow mindful of sound/letter relationships that make up spoken words. Based on their knowledge of speech sounds and letter shapes, they begin to read and spell words using consonants salient in speech.</p>	<p><b>Phonics</b> includes the ability to comprehend letter-sound representations and individual relationships between letters and sounds.</p>	<p>This skill is assessed by requiring the child to determine the correspondence between letters and the sound linked to them.</p>
	<p><b>The alphabetic principle</b> includes comprehending letter-sound representations, relationships between letters and sounds, and the skill to use sounds and map them to letters.</p>	<p>This skill is assessed by asking the child to recognize uppercase and lowercase letters, identify and syllables, and divide words into parts.</p>
<p><b>Late-alphabetic:</b> Children start to gain fluency in reading. They begin to identify patterns in reading, along with the knowledge of sight words.</p>	<p><b>Word Recognition.</b> Children acquire automatic word recognition and knowledge through learning root words, prefixes, suffixes, and how they affect the spelling and meaning of words.</p>	<p>This skill is assessed by requiring the child to read common words.</p>
	<p><b>Fluency</b> is the capability to string words together in phrases and read them fluently. As children become more fluent in their reading, they are expected to be able to read more and faster.</p>	<p>This skill is assessed by requiring the child to read out loud short and long passages and tracking the number of words accurately read per minute. Teachers can take notes on the number of words correctly and incorrectly read, words skipped, and adherence to written and spoken language rules when reading.</p>
<p><b>Full orthographic:</b> Children build up associations to syllables, word parts, and meanings of words that help them rapidly recognize whole words. Additionally, children learn the relationship between sound, spelling, and meaning in phrases (Moats, 2000)</p>	<p><b>Reading Comprehension.</b> The goal of reading comprehension is to read and understand phrases, sentences, and paragraphs that convey meaning.</p>	<p>This skill is assessed by requiring the child to read short and long passages and asking them questions about the text. Questions can focus on literal information included in the passage, comprehension of vocabulary in the context of the passage, inferences drawn from the information read, and organization and logic of the text as a whole and sections within it.</p>
	<p><b>Writing</b> is the ability to express ideas in a written form. Writing is an essential skill that supports reading. Evidence suggests that students who practice using phonics to write are also better at using phonics to read. Moreover, reading and writing go hand in hand, and therefore students should begin writing as soon as they can form letters.</p>	<p>Depending on the developmental stage of writing skills, these can be assessed with a variety tasks including copying letters from a model, writing words, writing sentences, and writing short and long texts following orthographic and grammatical rules.</p>

Source: Adapted from Ehri (1999) & Moats (2000)