



USAID
FROM THE AMERICAN PEOPLE



PHOTO | USAID/RWANDA READS PROJECT

ALIGN FOR MINIMUM PROFICIENCY

(Aligning Learning Inputs to Global Norms)

Using the Global Proficiency Framework

January 2023

This publication was produced for review by the United States Agency for International Development (USAID). It was prepared by EnCompass LLC and its partner MSI, a Tetrattech company, for the Data and Evidence for Education Programs (DEEP), Contract No. GS-10F-0245M. The views expressed herein do not necessarily reflect the views of USAID.

CONTENTS

- ACKNOWLEDGEMENTS II
- ACRONYMS AND ABBREVIATIONS..... III
- GLOSSARY IV
- I. INTRODUCTION I
 - The Role of GPF in the ALIGN Process 2
- II. OVERVIEW OF THE *ALIGN FOR MINIMUM PROFICIENCY* PROCESS..... 6
 - A. Four Critical Pedagogical Components..... 6
 - B. Parameters of an *ALIGN for Minimum Proficiency*..... 7
 - C. Complementing the ALIGN Process to Inform Decision-Making..... 11
- III. PREPARING FOR THE *ALIGN FOR MINIMUM PROFICIENCY* PROCESS..... 13
 - A. The Four Steps of an ALIGN Process..... 14
- IV. IMPLEMENTING THE ALIGN PROCESS: THE PEDAGOGICAL COMPONENTS..... 19
 - Component 1: Curriculum and Standards..... 21
 - Component 2: Teaching and Learning Materials..... 28
 - Component 3: Teacher Training..... 33
 - Component 4: Assessment 39
- BIBLIOGRAPHY 43
- ANNEX I – GLOBAL PROFICIENCY FRAMEWORK OVERVIEW 47

ACKNOWLEDGEMENTS

Norma Evans and Jennifer Bowser Gerst developed and authored this guidance with conceptual direction from the USAID Education team. Amy Mulcahy-Dunn and Gaëlle Simon of the Data and Evidence for Education Program provided in-depth content reviews of all drafts of this guidance.

The team would like to thank technical experts who availed time to provide input to the concept and process through consultations, peer feedback, or interviews. These include *USAID* (Melissa Chiapetta, Nathaniel Haight, Joanie Cohen-Mitchell, Rebeca Martinez, Saima Malik, Rebecca Rhodes, Ben Sylla, and Hetal Thukral), members of the *2022 GPF Technical Working Group* (Jeffrey Davis, Nathalie Louge, Sylvia Linan-Thompson, Shirin Lutfeali, Emily Miksic, Kiruba Murugaiah, Colin Watson, Yasmin Sitabkhan, Kristina Solum), members of the *2022 INEE Accelerated Education Working Group* (Kayla Boisvert, Noemi Gerber, Martha Hewison, Antoine Mioche), and representatives from *UNESCO* (Sylvia Montoya), *Bill and Melinda Gates Foundation* (Clio Dintilhac), *World Bank* (Joao Pedro Wagner De Azevedo, Diego Luna-Bazaldua, Michael Crawford, Alonso Sanchez and Maria Eugenia Oviedo), and *UNICEF* (Fumiaki Sagisaka). The team would also like to thank technical staff from *FHI 360*, *RTI International*, and *Creative Associates* for sharing case studies of their experiences using the Global Proficiency Framework as a reference for curriculum and standards reviews with their country counterparts.

The author team and colleagues also want to honor the memory of USAID Senior Education Specialist Rebecca Rhodes, a fierce advocate for equal access to quality education who co-led the development of the Global Proficiency Framework on behalf of USAID. Rebecca went further to envision the GPF's use as an alignment reference and the *ALIGN for Minimum Proficiency* process as a catalyst for ensuring all young learners achieve a world-class level education in foundational skills regardless of their context and circumstance.

ACRONYMS AND ABBREVIATIONS

ALIGN	Aligning Learning Inputs to Global Norms
CPD	Continuous professional development
DEEP	Data and Evidence for Education Programs
EiE	Education in Emergency
ESP	Education sector plan
GPF	Global Proficiency Framework
MOE	Ministry of Education
NEFR	National evaluation framework for reading
NFE	Nonformal education
SEL	Social-emotional learning
TLM	Teaching and learning materials
UNESCO	United National Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development

GLOSSARY

Assessment framework – A structured conceptual map of the learning outcomes of a program of study.

Assessment item – A questionnaire, a test, or any other activity used to evaluate whether a student has achieved the objectives that have been established.

Curriculum – The government-approved, prescriptive, written description of what teachers should teach at each grade level. The broader definition refers to *all* the learning experiences planned and directed by a school to attain its educational goals.

Curriculum framework – An organized plan or set of curriculum standards or learning outcomes that defines the content to be learned in terms of clear, definable standards of what students should know and be able to do.

Curriculum standards – Learning goals of what students should know and be able to do at each grade level.

Global Proficiency Framework (GPF) – defines important reading and mathematics-related knowledge and skills learners should develop in primary and lower secondary school. It also describes the minimum proficiency levels learners are expected to demonstrate, with respect to the defined knowledge and skills, at each grade level from grades one to nine. The content of the GPF includes:

- **Learning domains** – Refers to *categories* of knowledge that a learner is expected to master within a certain subject (e.g., “number and operations” and “measurement” are learning domains in mathematics). A domain of learning will be covered in most if not all grade levels one to nine.
- **Construct(s), sub-construct(s), knowledge, and skills** – Reflect the sub-categories of skills and sub-skills expected to be mastered within a specific learning domain. These represent the breadth and depth of content children are expected to learn related to that domain.
- **Proficiency Descriptors** – Describe the *exact* measure of performance that a student needs to demonstrate to show mastery of a skill at a specific grade level. In the GPF, these descriptors are categorized further in terms of lower to higher proficiency expectations by grade level, for example:
 - **Below Partially Meets Global Minimum Proficiency** – The learner *lacks* the most basic knowledge and skills. As a result, they generally cannot complete the most basic grade-level tasks.
 - **Partially Meets Global Minimum Proficiency** – The learner has *limited* knowledge and skills. As a result, they can partially complete basic grade-level tasks.
 - **Meets Global Minimum Proficiency** – The learner has developed *sufficient* knowledge and skills. As a result, they can successfully complete the most basic grade-level tasks.
 - **Exceeds Global Minimum Proficiency** – The learner has developed *superior* knowledge and skills. As a result, they can complete complex grade-level tasks.

Learning progression – A sequencing of teaching and learning expectations across multiple developmental stages, ages, or grade levels. Within the GPF, a learning progression for a concept is observable in the proficiency descriptors that are provided for each grade level. Learning progressions describe the construct-related skills a child needs to master, and the order in which she/he needs to master them.

Pedagogical content knowledge – Knowledge of the ways in which content in a discipline (literacy or numeracy) is organized and knowledge of effective discipline-specific instructional models and practices, i.e., the instructional practices that correlate with increased learning outcomes in either literacy or numeracy and the ability to use them effectively.

Policy Linking – A method used to link student assessments to a common scale (e.g., the Global Proficiency Framework). It allows countries to use their existing assessments—subnational, national, and cross-national—for reporting on global student learning outcome indicators, including Sustainable Development Goal (SDG) Indicator 4.1.1.

Teacher content knowledge – Knowledge of a subject area, for example, of the mathematics concepts in the curriculum, or in the case of reading, knowledge of the language of instruction including fluency in the target language, knowledge of the language’s structures and orthography, knowledge of the local culture, and finally knowledge of the different domains of reading and the interactions between them.

Syllabus – A summary-level description of course goals; explains the course structure and assignments, exams, review sessions, and other activities required for students to learn the material.

I. INTRODUCTION

The Sustainable Development Goals (SDGs), agreed upon within a resolution adopted in the United Nations (UN) General Assembly on September 25, 2015, included a commitment to ensure, by 2030, that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes (SDG 4.1). In 2017, member states agreed to measure performance on this goal by reporting the proportion of learners: “(a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex” (Gustafsson, M. 2019, p. 6).

The adoption of indicator 4.1.1 shifted the global focus of education systems from providing access to education programs to ensuring learners have access to a quality learning environment. This shift acknowledged the global research literature underscoring the critical contribution of the foundational skills of reading and mathematics to learners’ overall academic performance (Juel 1988; Wharton-McDonald et al. 1988; Duncan et al. 2007; Duncan & Magnuson 2011; Watts et al. 2014; Claessens & Engel 2013). It also acknowledges research emerging from health and development sectors that identified foundational skills as an essential contributor to individuals’ social and economic security and well-being and reducing social inequality (OECD 2010; UNESCO 2016).

The recent COVID-19 epidemic underscored the urgency of focusing on foundational skills. A joint October 2022 report by the World Bank, United Nations Educational, Scientific and Cultural Organization (UNESCO), United Kingdom Foreign Commonwealth and Development Office (FCDO), United Nations Children’s Fund (UNICEF) and the Bill & Melinda Gates Foundation estimates that the learning poverty rate¹ in low- and middle-income countries has surged to an estimated 70 percent from the pre-pandemic 2019 level of 57 percent, implying that all of the gains made in learning since 2000 have been lost. Projections provided by the ONE Campaign are equally alarming. The number of ten-year-olds lacking basic skills increased by 17 percent to 70 million learners in 2021 alone. The campaign estimated this number could potentially rise to 750 million by 2030 at the current rate, with sub-Saharan Africa accounting for 40 percent of at-risk learners (ONE Campaign 2021).

There is an urgent need to reverse this trend, so all learners develop the foundational skills required to participate fully in their community’s social and economic life. That means using evidence-based approaches to identify where resources are most needed, both across countries and within a country, to address learning inequities. This will ensure that an increased number of learners demonstrate minimal proficiency levels.

Some of the factors that influence learners’ achievement, such as poverty, health, or nutrition, lie beyond the jurisdictions of Ministries of Education (MOEs). Others, like the nature of the curriculum or learning resources, or the quality of teacher training, are entirely within their jurisdiction. Introducing evidence-based, strategic changes to the factors that fall within the jurisdiction of MOEs has the potential to improve learners’ foundational reading and numeracy skills.

¹ Learning poverty refers to the share of children who cannot read a simple text with comprehension by age ten.

What is an “ALIGN for Minimum Proficiency” process? An *ALIGN* (Align Learning Inputs to Global Norms) for *Minimum Proficiency* process is an evidence-based gap analysis to identify factors that may be impeding learners from developing foundational knowledge and skills in reading and mathematics.

An *ALIGN for Minimum Proficiency* process focuses on identifying potential gaps in four important pedagogical components that fall within the jurisdiction of MOEs: curriculum, teaching and learning resources, teacher training, and assessment. The process uses data-driven decision-making to determine whether component inputs are optimized, i.e., whether they provide *all* learners with the supports necessary to develop strong foundational reading and mathematics skills. It identifies potential gaps or misalignments preventing learners from developing these skills, and actions to address them. The *ALIGN for Minimum Proficiency* process can be used at the national or subnational level, for both nonformal and formal education systems. The common approach ensures that all education systems and programs within a jurisdiction are viewed as complementary rather than competing, and that they all work toward common learning goals.

This document briefly introduces the Global Proficiency Framework (GPF) and how it is used to frame the *ALIGN* process. It then outlines the goal of an *ALIGN for Minimum Proficiency* process, its benefits, and its limitations. It examines the four main steps in the process and the guiding principles that inform each step. Finally, the document examines in greater detail the application of an *ALIGN* process to each of the four pedagogical components. It proposes key questions to guide *ALIGN* component analysis and potential actions to take, depending upon the answers obtained.



The *ALIGN for Minimum Proficiency* process is a global good that supports partner governments, curriculum and material developers, implementing partners, and other users interested in:

- Determining whether learning inputs are sufficient to meet a country’s or a program’s aspirations with respect to SDG 4.1.1.
- Identifying necessary actions for raising proficiency levels for all learners.
- Ensuring informal learning program inputs are aligned internally and with the formal education system, so the two programs are viewed as complementary.
- Ensuring teaching and learning materials and training inputs address the breadth and depth of reading and mathematics skills required to demonstrate minimal proficiency under SDG 4.1.1.

THE ROLE OF GPF IN THE ALIGN PROCESS

The goal of the *ALIGN for Minimum Proficiency* process is to determine whether the *pedagogical* inputs offered at the national, subnational, or classroom level are sufficient for learners to develop minimal proficiencies in reading and mathematics and, if not, identify priority actions or interventions needed to address the situation. Having an agreed-upon definition of the minimal proficiencies learners must be able to demonstrate at key grade levels is essential for an *ALIGN* process. It ensures that all those intervening in learning, regardless of where they are in the world, are working toward a common goal.

The GPF provides that common definition. It is a research-based assessment framework, anchored in the science of teaching and learning reading and mathematics, that describes the minimal knowledge and skills that learners should be able to demonstrate, for both reading and mathematics, at each grade level

from grade one to grade nine, *regardless of where they live in the world or the language in which they are learning*. The development of the GPF started with UNESCO International Bureau of Education (IBE), which sponsored “bottom-up” analysis of 25 national reading curricula, 73 regional/international reading assessment frameworks, 53 national mathematics curricula, and 115 regional/national mathematics assessment frameworks. That initial study identified a general global consensus of the minimal knowledge learners should have and the minimal skills they should be able to demonstrate in both reading and mathematics as they move through the grade levels. A UNESCO-appointed scientific committee of international reading and mathematics educators, curriculum experts, and psychometricians then confronted this initial consensus with global research findings to produce a draft GPF.

The draft framework was field tested in Bangladesh, Djibouti, the Gambia, Ghana, India, Madagascar, Malawi, Nigeria, and Senegal in 2019 and 2020.² The results of the field test allowed committee members to further refine the GPF, based on concerns and inconsistencies raised by MOE technical staff in those countries. The minimal learning proficiencies in the 2021 GPF, and the recommended progression of that learning over time, are thus firmly anchored in international research, informed by global curriculum and assessment trends, and grounded in country realities. This triangulation ensures that the minimal proficiencies outlined in the GPF reflect global trends in curriculum and assessment design.

UNESCO initially developed the GPF for reporting on international indicators of learners’ reading and mathematics skills. By providing a standard scale for linking or interpreting country-specific assessment results, the GPF allows countries to use their existing national or subnational learning assessments and a methodology called *Policy Linking* to report on indicators like SDG 4.1.1 or USAID’s Foreign Assistance Indicators ES.1-1, ES.1-2, ES.1-47, and ES.1-48.³ This, in turn, allows for the comparison, aggregation, and tracking of assessment results from different countries or from different jurisdictions within a country.



INTRODUCING THE GLOBAL PROFICIENCY FRAMEWORK TO PARTNERS

Annex I of this guidance contains useful graphics that facilitators of the *ALIGN for Minimum Proficiency* process may use, in addition to the information above, to [introduce partners to the Global Proficiency Framework](#). At that web page as well, is the ***Introduction to the Global Proficiency Framework Module***. The most important resources for the team will be local reading and mathematics specialists who regularly engage in curriculum development, guidance for teaching and learning materials (TLMs), and teacher training and assessments, and who can understand the boundaries of the GPF.

The GPF is a powerful reference for reporting on international indicators, and for gap analysis. Since the GPF’s release, MOEs, donors, and technical partners have come to recognize its potential as a gap analysis tool to improve reading and mathematics performance. That potential is rooted in two important features of the GPF: 1) it represents a global consensus of what learners must know and be able to do at each grade level and 2) it describes qualitatively, at each grade level, what

² For the field tests, some countries reviewed the GPF in the context of a policy linking activity. In other cases, the GPF was used to identify whether the existing curriculum addressed critical reading and mathematics skills or to develop a national assessment framework.

³ For more information on the development of the GPF, see the [Introduction to the GPF](#) and the [Policy Linking Toolkit](#).

learners who are not meeting, partially meeting, meeting, or exceeding expectations can do with respect to each skill retained.

However, decision-makers embarking on an ALIGN process may want to cross-reference the knowledge and skills included in the GPF and the suggested learning progressions across grade levels with those of curricula from high-performing countries in the region or beyond. Comparative analyses such as these can help identify commonalities and differences across frameworks and curricula, including the progression and pace of learning over time, and spark research-based discussions of the reasons for commonalities and differences (see Case Study #1). They can also identify additional knowledge and skills important to the country/region but absent from the GPF.



Case Study #1 – Central Asia

In 2021, a Ministry of Education in the Central Asia region was encouraged by a technical assistance partner to refresh its review of grade one to four reading and mathematics standards, including potential gaps in requisite skills and knowledge, using the GPF. Because the country was preparing for the Trends in International Mathematics and Science Study (TIMSS) exam and often benchmarked its progress against South Korea's system, the technical team used the TIMSS framework and South Korea's curricula as additional cross-references to triangulate its findings as they built their recommendations.

The GPF-based exercise guided the country to clarify *what number* learners should be able to count to by the end of [specific grade], in place of unclear statements like “students should learn to count.” The country also introduced a new progression for learning fractions during grades one through four (simple to complex concepts), whereas this skill was previously introduced only at grade five, and the country introduced currency during grades one through four for the first time. The GPF also helped the country designate what it means for a learner to “meet” or “exceed” grade-level skill expectations. The exercise informed a revised day-to-day scope and sequence for reading and mathematics in grades one to four, while also positioning the country to report on SDG 4.1.1 and other international indicators.

The GPF is not exhaustive. It is limited to knowledge and skills that are common across curricula and regional/international assessment frameworks, and those that can be easily measured on large-scale assessments. The GPF was designed as a common framework for interpreting national or subnational assessments. As such, it is necessarily decontextualized. It focuses on knowledge and skills the global community has identified as essential for reaching minimum proficiency and that can be easily evaluated during large-scale assessments. This makes it a valuable tool for gap analysis although it does not encompass *all* of the skills and knowledge that are expected to be included in a country's curriculum framework.

The GPF's reading proficiency descriptors, for example, are limited to three curricular domains: comprehension of spoken or signed language, decoding, and reading comprehension. The knowledge and skills outlined are those that all learners should be able to demonstrate, regardless of where they live, the language in which they are learning, or the complexity of that language. However, essential precursor skills to reading such as phonological awareness, writing skills, and other language-specific skills are not included in the GPF, despite their importance. The same can be said for digital literacy skills, social-emotional skills, or attitudes and dispositions that are critical to learners' personal and social development, their development as readers, and their creative thinking skills. These skills are particularly

important in education in emergency and nonformal education (NFE) settings. In conducting an ALIGN process, decision-makers may want to go beyond the knowledge and skills outlined in the GPF and include other aspects important for the context, drawing from global references or from standards outlined in local curricula.

The GPF does not impose specific pedagogical practices. The GPF describes the finality of learning, i.e., what learners need to know and the skills they need to demonstrate. How they develop the required knowledge and skills can vary, depending upon the culture, the context, and associated ways of knowing, doing, and demonstrating. That said, the GPF assumes that learners are being taught *in a language they speak and understand*; if they are not, they might be expected to perform at a lower level than their peers.

II. OVERVIEW OF THE *ALIGN FOR MINIMUM PROFICIENCY* PROCESS

A. FOUR CRITICAL PEDAGOGICAL COMPONENTS

As previously noted, an *ALIGN for Minimum Proficiency* process focuses on four pedagogical components that fall within the jurisdiction of a MOE and that research shows contribute to learner performance (see Figure 1, next page), in formal education programs as well as in NFE settings:⁴

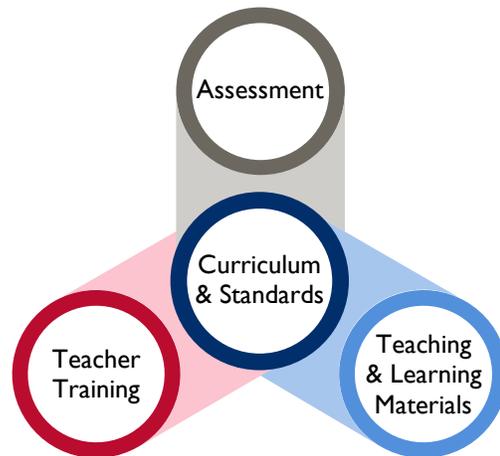
1. **Curriculum standards and the curriculum itself** – The process examines whether the curriculum standards and the curriculum itself address critical reading and mathematics knowledge and skills learners must develop to become autonomous readers and mathematical problem solvers. It also examines whether the proposed progression of learning aligns with the global evidence base on how reading and mathematics learning develops over time.
2. **Teaching and learning materials (TLMs)** – The process identifies whether the content of TLMs is sufficient to ensure learners develop critical reading and mathematics knowledge and skills, and whether the sequencing of activities aligns with research on reading and mathematics learning progressions.
3. **Teacher training** – An *ALIGN* process examines whether preservice, in-service, and school-based continuous professional development (CPD) programs introduce teachers to:
 - a. The critical reading or mathematics knowledge and skills learners need to develop.
 - b. How this knowledge and these skills develop or progress over time.
 - c. The evidence-based instructional practices that foster their development and how to implement them effectively.
 - d. How to assess learner performance on key knowledge and skills.
4. **Assessment** – An *ALIGN* process identifies whether classroom-based, subnational, and national assessments measure learner performance on critical knowledge and skills.

Interconnectedness of the pedagogical components. The four components are highly interconnected. Each reinforces and builds on the other three. TLMs, for example, assist teachers in implementing the curriculum and hence are keyed to curriculum learning outcomes. Pre-service and in-service programs help teachers develop the knowledge and skills required to implement the curriculum as intended. This includes using curriculum based TLMs effectively and assessing learner performance on key curriculum outcomes. Large-scale assessments measure learner performance on these same key learning outcomes. It is possible that despite alignments observed between these components, learner performance is suffering due to the quality of classroom instruction; in this case, a deeper inquiry beyond the *ALIGN* process is needed.

⁴ Although a four-component *ALIGN* process is equally valuable in formal and nonformal settings, it may be more challenging to conduct an *ALIGN* process in the nonformal sector, particularly in education in emergency (EiE) contexts.

The interconnectedness of the four components and the need for coherence across educational inputs means that important changes to one component should result in changes to the other three. Although decision-makers may opt to focus the ALIGN process on a single component or even a subcomponent of a component (preservice teacher education, or school-based CPD, for example), decision-makers interested in optimizing learning gains may want to adopt a comprehensive or systemic approach, aligning the four components to the GPF and to each other. An updated and globally aligned curriculum and standards reference should form the core of other component reviews and may merit revisiting during the process.

Figure 1: Interconnectedness of the four components



Hierarchical nature of the pedagogical components. There is a natural hierarchy to the components. The curriculum standards provide the framework for the development of the curriculum. Once developed, the curriculum determines the content of TLMs and teacher training programs. It also determines the knowledge and skills to be evaluated in national and classroom-based assessment programs.

There is, however, reciprocity in the hierarchy: the results of large-scale national, regional, or international learner assessments can reveal needed changes to teacher training programs, TLMs, or the curriculum itself.

Component alignment is necessary but not a sufficient condition for improved learning outcomes. It is possible to have pedagogical alignment across the four components, but still have less than optimal performance with respect to the minimal proficiencies outlined in the GPF. In such cases, as part of the ALIGN process, decision-makers may want to examine factors which may be impeding learners' academic progress from within the school/learning environment, political and home/community environment (see Section C on complementary analyses).

B. PARAMETERS OF AN ALIGN FOR MINIMUM PROFICIENCY

The *ALIGN for Minimum Proficiency* process uses data-driven decision-making to determine whether the component inputs are sufficient for learners to develop the minimal reading and mathematics proficiencies outlined in the GPF. It identifies component-specific resource gaps or misalignments across components that may be limiting learners' progress. The ALIGN process can also identify underused resources that, when better leveraged, could improve learning outcomes.

The parameters for the ALIGN processes must reflect contextual priorities and the resources available to carry out a gap analysis of alignment with the GPF. Initial decisions on the parameters of an ALIGN process (see Figure 2) will determine the breadth and depth of the analysis and the procedures used to carry it out.

Figure 2: Four parameters of an ALIGN process



Breadth of components addressed. As mentioned previously, learning gains are generally optimized when a comprehensive or systemic approach is used and all four components are aligned with the GPF and with each other. That said, the breadth of an ALIGN process will vary according to contextual priorities and the resources available to support it.

Collecting the data required to complete an ALIGN process on all four components can be labor and resource intensive. For that reason, countries or programs may determine it is not realistic or feasible to address all four components or even all subcomponents of a component. Those that have already aligned some pedagogical components with evidence-based teaching and learning principles or have limited resources to allocate to the ALIGN process may opt for a component-specific approach, focused on one or more components/subcomponents. Formal or nonformal education programs that have recently developed evidence-based curricula for reading or mathematics, for example, but do not have tools for monitoring learner performance on these new curricula may decide to focus the ALIGN process on the assessment component. Alternatively, programs may opt to focus on modifications needed to adapt existing teacher training programs to ensure teachers are aware of the new curriculum standards or learning outcomes, and the evidence-based practices that foster their development.

Countries or programs may opt to take interim steps, such as aligning all four components to updated skills and knowledge for specific grade levels or subjects. Or they may choose to focus on priority subcomponents within a component. For example, if education sector plans (ESPs) prioritize the reform of preservice, decision-makers may focus on that component. Alternatively, if there has been a recent initiative to align the formal or nonformal reading curriculum with global research, decision-makers may want to limit the curriculum component of the ALIGN process on mathematics.

Target populations. The team will decide whether its ALIGN process will focus on all or some components/subcomponents in parallel to whether it will focus on a) the formal and/or nonformal education system and b) which grade levels (formal grades one to nine), based on resources and immediate need or interest. Decision-makers may, for example, prioritize specific grade levels (early primary, late primary, or lower secondary) or focus the inquiry more narrowly on specific populations within these grade levels, such as language groups or disability

 **In countries which are grappling with very low learner performance or a high level of learning inequality,** decision-makers might want to consider focusing the ALIGN process on the early grades, identifying and filling gaps to ensure beginning learners develop strong foundational skills. The ALIGN process can then be repeated at subsequent grade levels in the following years, to ensure the learning gains from early primary are leveraged as learners move up the grade levels. The ALIGN process should maximize conditions for *all* learners to achieve minimum proficiency.

groups. The process can also focus on NFE programs, such as accelerated learning or catch-up programs. The target population selected will vary depending upon the context.

Centralized versus distributed leadership. The leadership of an ALIGN process can either be centralized, under the direction of a single MOE team or donor/implementing partner, or distributed across departments, development partners, and/or implementing partners, with different entities leading the review of different components or subcomponents. In the case of an *ALIGN for Minimum Proficiency* process focused on the formal education system, for example, the leadership of the teacher training review may naturally fall to the departments responsible for teacher education or to donors or implementing partners working in this area. The leadership model may be further distributed when preservice and in-service education fall under two different Ministry departments or are supported by different donors or implementing partners. The use of the GPF as the common reference point for component analysis ensures consistency of focus across the components, regardless of whether a centralized or distributed leadership model is adopted.

Before launching component-specific ALIGN processes, regardless of the leadership model used, it may be advantageous to have joint working sessions with all component representatives to review the content of the GPF (and any other knowledge or skills identified as important for the context) to ensure those involved have a common understanding of the targeted knowledge and skills, and of requisite knowledge needed to build proficiency in specific areas (learning progression). The joint working sessions should also address the purpose of the ALIGN process, the steps involved in its completion, and the guiding principles for decision-making.

Whether decision-makers opt for a centralized or distributed leadership model, the review process should weave in opportunities for cross-component sharing of findings and recommendations. Such sessions will ensure coordination of efforts and agreement on priority actions and investments across the components, resulting in more cohesive and integrated educational inputs.

Synchronous versus asynchronous timing. Finally, an ALIGN process for different components or subcomponents can be carried out simultaneously, over the same general time period, or asynchronously, at different points in time. Given the overlap and interaction between the different pedagogical components, when an ALIGN process uses an asynchronous approach, it may be necessary to revise or update the results of previously examined components to ensure alignment of actions and investments.



BENEFITS OF AN ALIGN FOR MINIMUM PROFICIENCY PROCESS

The GPF is a universal starting point and fresh lens for identifying what needs to be done to ensure all learners achieve minimum proficiency in reading and mathematics. Regardless of the parameters adopted, the ALIGN process can assist with:

- Determining **whether current pedagogical support within and across the four components are sufficiently robust** that all learners will be able to demonstrate, at each grade level, the minimal proficiencies outlined in the GPF.
- Identifying whether the **progression and pace of learning are conducive** to learners developing these proficiencies (see section D, below, for caveats regarding “sufficiency” of those components).
- Assessing the **level of complementarity and alignment between nonformal or accelerated education programs and formal education programs**, so that the former can be certified and institutionalized within the national education systems. This, in turn, can give much needed visibility to the performance of learners in nonformal programs.
- Comparing the **level of alignment of learning inputs offered by different educational systems within a country** (states, provinces, languages of instruction), with a view to ensuring equity of resources across systems.
- Identifying **critical areas of misalignment** that may be compromising learners’ performance.
- Supporting a backward mapping or planning process, whereby **new inputs or resources needed to address learning gaps revealed in national assessment** are identified and implemented.
- Providing decision-makers with **data-informed opportunities to improve learner performance** by leveraging existing resources, transforming existing supports, strategies, or policies, or adding new ones.
- Identifying more realistic **short and medium-term learning targets in reading and mathematics**, aligned with available inputs, as well as measures to reduce learning inequality.
- Supporting the development of **strategic plans to improve learning inputs and proficiency**, e.g., future curricular content, teacher training content standards, instructional materials, pedagogical supervision tools, assessment tools, and other quality assurance tools.

Expertise and time frame needed to conduct the ALIGN process. The level of external expertise required to conduct the ALIGN process depends on the context. A program or MOE with a deep knowledge of the GPF and of data-driven diagnostic processes should be able to complete the process with their in-house mathematics and reading curriculum and learning assessment experts, including master teachers, with little or no external technical assistance. Those who have more limited experience with the GPF or diagnostic processes may require external technical support to launch the process, and to support specific activities. The critical role of facilitators is discussed again in Section III, “Preparing for an *ALIGN for Minimum Proficiency Process*.”

The amount of time required depends upon the context and the parameters selected. The recent curriculum alignment process described in Case Study #1/Central Asia (see previous section), for example, was completed over a two- to three-month period, with participants meeting in subject and grade-level groups once a week for two hours to identify gaps and opportunities. Each group was made up of six to ten national curriculum specialists each for reading and for mathematics – among them were university instructors, curriculum developers, and master teachers. The discussions centering around curricular standards and global norms around aligning were supported by two external (international)

curriculum experts, one for reading and one for mathematics, who possessed a deep understanding of the GPF, were knowledgeable of language transition issues, and who organized and participated in all the virtual meetings. The process resulted in the development of new standards and a new scope and sequence for mathematics and reading learning materials, both of which were subsequently field tested in classrooms and NFE settings over a six-month period to ensure they were manageable for teachers.

It is important to keep in mind that the above example is merely illustrative. The time and resources required to complete an ALIGN process are very much context dependent. Using the ALIGN process to ensure large-scale national assessments meet the technical requirements for reporting on international indicators, for example, may require specialized technical assistance not generally found in many countries, and may take a considerably longer period of time.

C. COMPLEMENTING THE ALIGN PROCESS TO INFORM DECISION-MAKING

Other gap analyses or diagnostics, when conducted in parallel with an ALIGN process, can assist decision-makers in identifying other important contributors to low learner performance.

Language of instruction related factors A GPF-focused *ALIGN for Minimum Proficiency* process can help identify the extent to which the curriculum supports the development of reading comprehension skills in a given language. However, if results show that curriculum inputs are sufficiently aligned but learners are performing below aspirations, decision-makers may want to examine whether policies related to the language of instruction are compromising learners' progress (including language of instruction alignment with language of assessment), or whether the curriculum and TLMs provide sufficient scaffolding for language transition(s).

Disconnect between curriculum and its implementation Decision-makers may also want to examine factors related to teachers' interpretation of the curriculum—what they attend to in the classroom, what they ignore or downplay, how they manage diverse levels of competency, and the types of instructional practices they use, including whether and how they use available instructional materials, including digital materials. Data can also be collected to determine whether there is sufficient instructional time in the school day dedicated to reading and mathematics, or the extent to which the time available is used effectively. Classroom data can also reveal whether learning resources are available in sufficient quantities for all learners, and whether they are appropriate for learners with disabilities or children in crisis contexts.

Socioeconomic and child well-being factors Decision-makers may want to examine socioeconomic and child well-being factors contributing to learner performance that fall outside the jurisdiction of MOEs and the boundaries of the GPF. These include whether learners are well-nourished and well-rested, are in good health, and whether they feel safe at home or school (Dobbie & Fryer 2013; Fitchett et al. 2014; Bühmann & Trudell 2007). An extensive body of evidence also points to the importance of social and emotional learning skills (USAID 2019) in children's performance. Learners in classrooms where they are engaged, confident, and mutually cooperative during learning activities perform better. Given the importance of social emotional learning (SEL) skills and the fact they can be easily integrated into reading and mathematics programs, decision-makers may want to examine their impact as part of their deliberations on how to optimize learning outcomes.



COMPLEMENTARY ANALYSIS

The list below, which is not exhaustive, shares the diverse factors which decision-makers may decide to examine, particularly in a specific area or program, to understand what may be impeding learning:

Factors related to the school/learning environment

- Quality of learning environment (child-friendly schools)
- Scaffolds available for language transition
- Instructional time dedicated to building foundational skills in reading and mathematics, including actual time on task
- Teacher interpretation of the curriculum, via observations of teacher lessons and in particular their instructional practices which may include:
 - Ability to address diverse learner needs (e.g., differentiated instruction, universal design for learning)
 - Actual language of instruction used, including alignment of that with language of assessments
- Social and emotional learning and psychosocial well-being
- Context appropriateness of learning technologies (e.g., assistive technologies, digital and other distance learning technologies) and of teacher resources (e.g., culturally appropriate pedagogy)
- Teacher competency levels in mathematics and reading and in language of instruction
- Availability and accessibility of teaching and learning materials

Factors related to political and home/community environment:

- Bias and discrimination issues (within and outside school, including ethnic, language, disability, gender, sexual orientation–related)
- Gendered vulnerabilities and gender-based violence trends
- Socioeconomic and child well-being factors (e.g., health, psychosocial, trauma)
- Political economy issues (e.g., incentives and disincentives to alignment)
- Other significant environmental, health, and conflict-related disruptions

The recent [RAPID Framework and Guide for Learning Recovery and Acceleration](#) provides additional gap analysis protocols to identify factors related to COVID-19 learning disruptions.

Complementing the ALIGN process with gap analyses like those referenced above may reveal some positive deviances well worth exploring. For example, if learners are developing minimum proficiencies in challenging environments and with seemingly fewer supports than their peers in less challenging environments, it might be worthwhile to identify the factors contributing to their success and examine the possibility of replicating those factors on a larger scale. The process can potentially identify cost-effective and contextually appropriate strategies to improve learners' performance.

The *ALIGN for Minimum Proficiency* process, when complemented with other gap analyses, can also help anchor dialogues about equity and efficiency in resource allocation, and encourage stakeholders to harmonize their inputs and resources so more learners achieve minimum proficiency. It can also reveal diverging stakeholder perspectives on policies and strategies, and other reasons for inconsistencies in norms, processes, or practices which are compromising learning.

III. PREPARING FOR THE *ALIGN FOR MINIMUM PROFICIENCY* PROCESS

The ALIGN process can take place at any time. The ideal moment, however, is when decision-makers are committed to identifying and addressing factors contributing to learner underperformance and have the resources and capacity to do so. This could be after the presentation of national assessment results or after a policy linking workshop when technicians present decision-makers with an indication of the percentage of learners meeting international minimal proficiency standards, prior to developing a new Education Sector Strategic Plan, or prior to an in-country review of the education sector.

Readiness to carry out an ALIGN process. Regardless of the motivation for embarking on an *ALIGN for Minimum Proficiency* process, before starting it is essential to assess decision-makers' ability to carry out the process. This includes identifying the technical and financial resources available to support the process, the additional resources required to fill identified gaps, and technical partners willing to support the process. Doing this prior to launching an *ALIGN for Minimum Proficiency* process can avoid potential future obstacles.

It is also essential to assess decision-makers' willingness to follow through with actions identified to address gaps or misalignments, i.e., whether they have the political will to prioritize improving pedagogical inputs over the medium and long term. This could include, for example, whether they are willing to:

- Ensure the necessary technical staff are available to participate in the process, given competing responsibilities. Competing responsibilities may require decision-makers to restrict the parameters of the ALIGN process to one or more components (or subcomponents), or to adopt a staggered approach, focusing initially on early primary and moving on to upper primary and eventually junior secondary as technical resources become available.
- Review existing reading and mathematics curricula.
- Review teacher and learner instructional materials and teacher training programs for degree of alignment to revised curriculum.
- Identify any gaps in pedagogical inputs which may be exacerbating learning inequalities in specific sub-regions or sub-populations.
- Publicly acknowledge pedagogical priorities like those listed above by incorporating appropriate actions and targets in policy documents, for example, education planning frameworks.

Educational planners should consider whether aligning this process with the policy linking process for reporting on international indicators, or with UNESCO's *Assessment for Minimum Proficiency Levels* activities, will enable the ALIGN process to leverage the political will, capacity-building opportunities, and resources that these activities generally generate.⁵

Inclusive and participatory. It is critical to involve key stakeholders in the ALIGN process and to engage experts and practitioners at the university and primary schools in data collection and analysis of

⁵ In addition to Policy Linking, which was previously referenced, refer to [Assessments for MPLs – MILO: Monitoring Impacts on Learning Outcomes](https://www.unesco.org/en/assessments-for-mpls-milo) (unesco.org).

alignment of pedagogical components. Doing so will ensure that actions identified reflect the realities of teacher training programs and of classroom learning environments. It is also critical to involve representatives working in the NFE sector and supporting EiE programs. Although the requisite data and information needed to carry out an ALIGN process for these populations may be incomplete, seeking their input on designing an inclusive and participatory process is essential for ensuring ownership of findings. Key decision-makers (related to policy and finance) must take ownership of the findings and be committed, technically and politically, to implementing actions to address gaps. That is most likely to happen if decision-makers, stakeholders, and practitioners work collaboratively to define the processes to be used (see next section) and develop an implementation plan to see the analysis process through to completion. MOE officials, donors, and implementing partners are also more likely to commit technical, political, and financial resources to fill gaps identified if they participate in the process, including establishing the goals and parameters of the ALIGN process, identifying appropriate data collection processes, and analyzing the results.

Informed and contextually appropriate. The ALIGN process is but one piece of an ongoing dialogue between MOEs, donors, implementing partners, and parents on how to improve learning outcomes. For this process to be a valuable contribution to that ongoing dialogue, it needs to be contextually appropriate, i.e., it needs to recognize local and national realities and priorities and identify resource- and policy-appropriate solutions for addressing identified gaps or misalignments. Further, these solutions need to acknowledge and build upon existing commitments and priorities, especially those in ESPs.

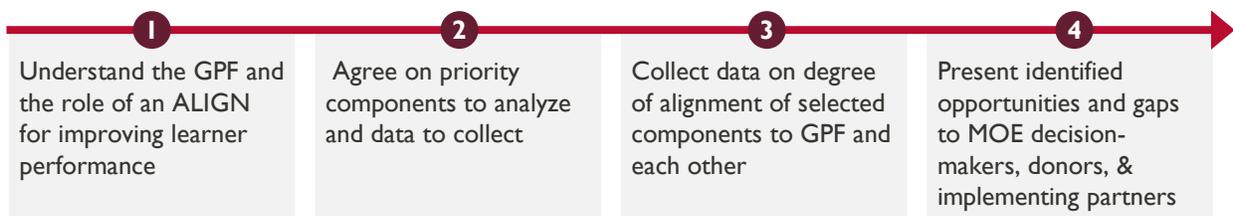
 **The ALIGN for Minimum Proficiency process needs to factor in local/cultural ways** of knowing and doing, including valuing and building on participants' existing knowledge and experiences, throughout the process.

Data-driven. To justify the political capital and technical and financial resources required to conduct an ALIGN process, the inquiry into pedagogical components needs to be data-driven and evidence-based, and there needs to be a clear and direct link between the data findings and any proposed actions. Moreover, the data need to be perceived by stakeholders as accurate and complete.

A. THE FOUR STEPS OF AN ALIGN PROCESS

This section describes each of the four steps of the *ALIGN for Minimum Proficiency* process and associated activities. An *ALIGN for Minimum Proficiency* process, regardless of whether it uses a centralized or distributed leadership model or is carried out within a given time frame or asynchronously, over time, generally follows the four steps outlined in Figure 3 below.

Figure 3: Four steps of an ALIGN process



The role of MOE and technical partner representatives in each step varies, depending upon contextual political realities and stakeholders' readiness and ability to carry out the required data collection and

analysis processes. Regardless of the leadership model adopted, it is critical to involve all stakeholders in steps 2 and 4 of the ALIGN process: identifying priority components or subcomponents for the review and identifying priority actions to address identified gaps or misalignments. Doing so will ensure coordination across components and result in a comprehensive approach. Involving all stakeholders in steps 2 and 4 will also increase the likelihood of sustained technical, political, and financial support from development partners and implementation agencies for the actions required to fill identified gaps.



The four steps of the ALIGN process are common to all data-driven, systemic reform initiatives. That said, the processes used and the activities carried out in each step will necessarily vary, depending upon the cultural ways of knowing, doing, and coming to know specific to each context.

STEP 1: UNDERSTAND THE GPF AND THE POTENTIAL OF A GPF-BASED ALIGN PROCESS TO IMPROVE LEARNER PERFORMANCE

The GPF framework, because it carries the endorsement of the broader international community, is a powerful political document. An essential first step in the ALIGN process is thus ensuring that decision-makers understand the GPF: what it is, why UNESCO developed it, the processes used to develop it, the link to the research literature on evidence-based reading and mathematics learning and global curriculum and assessment trends, and the implications in terms of the knowledge valued or represented in the framework. Socializing the GPF with decision-makers prior to the launch of the ALIGN process is a critical first step. This initial discussion should naturally lead to an examination of how the GPF can be used as an analytical tool to determine whether the current curriculum, TLMs, and teacher training programs are robust enough to ensure learners develop the minimal proficiencies outlined in the GPF, and whether current national, subnational, and classroom assessment programs measure learner performance on these same proficiencies.

Participants will enter Step 1 at different places, depending upon their prior knowledge of the GPF and overall strategic planning processes. For example, in some contexts, participants may have used the policy linking methodology to establish learner performance on international indicators, or develop a new national assessment or new mathematics or reading curricula. They will already be familiar with the GPF but may not be aware of its uses in other areas. In other contexts, participants may have participated in discussions on the need to report learner performance on international indicators but may not have examined the GPF in detail or how it can be used in conjunction with policy linking to report on international indicators. Before embarking on Step 1, it is essential to assess participants' prior knowledge of the GPF and tailor discussions appropriately.

Preliminary alignment of the GPF to national curriculum. It is difficult to see the value of the *ALIGN for Minimum Proficiency* process if decision-makers perceive that the knowledge and skills designated by grade level in the GPF are not all relevant for the country's national curriculum. It may thus be advantageous to conduct a preliminary comparative analysis of GPF and curriculum learning outcomes to identify areas of alignment and misalignment with international standards and whether sufficient learning time is dedicated to requisite skills. Presenting this prior to pursuing a deeper inquiry into areas of misalignment across components can help decision-makers recognize the pertinence of the GPF and heighten the value of a GPF-based ALIGN process.



Facilitators will need to articulate the benefit of incorporating the ALIGN process into the educational reform landscape among other situational analyses. Highlighting the link between the *ALIGN for Minimum Proficiency* process and the SDGs, and that an ALIGN enables educational systems, programs, or partners to identify if there are sufficient supports to ensure that learners perform as desired or expected on the SDGs, can help decision-makers recognize the value and the complementary nature of an ALIGN and other strategic analyses.

STEP 2: AGREE ON PRIORITY COMPONENTS TO EXAMINE, DATA TO COLLECT AND ANALYZE, AND PARAMETERS OF THE ALIGN PROCESS

Once participants have committed to conducting an *ALIGN for Minimal Proficiency*, the next step is to develop a plan to carry it out. This entails identifying:

- a. **Which of the four pedagogical components, or subcomponents, the ALIGN will focus on and why.** Given the hierarchical relationship between the components, an ALIGN ideally starts by reviewing the curriculum and curriculum standards to determine their degree of alignment to the GPF. If there is misalignment with this component, there will generally be misalignment with other components.

The selection of components for an ALIGN process should consider the degree to which decision-makers are willing, politically, financially, and technically, to entertain potential changes to specific components or subcomponents. Decision-makers may not have the political will to focus on components or subcomponents that have recently been revised or updated. They are more likely to select a component for a GPF-based ALIGN, and to address any gaps found, if there are no perceived or expressed limits on the learning or teaching approaches teachers can use, or the content reading or mathematics curricula can address. Since the GPF is aligned with international assessments that many countries participate in, politically it may be easier to justify changes to the assessment, which will eventually lead to changes in other pedagogical components.

As mentioned previously, it may not be feasible or advantageous to focus on all four pedagogical components. **If resources are scarce, decision-makers may decide to adopt a modular approach** and focus on a priority component (or subcomponent) or priority grade levels. They might, for example, limit the analysis to early primary, so any inputs or resource gaps can be addressed early in learners' learning trajectory. As resources become available, they may move on to upper primary and then junior secondary. Using a staggered approach has the benefit of ensuring young learners develop the foundational skills they need to be successful at higher grades.

When ALIGNs do not focus on all four components, or even all the subcomponents of a component, decision-makers need to recognize the importance of aligning proposed modifications across the remaining components/subcomponents. Doing so will ensure a comprehensive, systemic approach to improving learning outcomes. For that reason, the planning process should build in opportunities for participants to communicate modifications identified in the targeted component(s) to decision-makers, donors, and implementing partners supporting the remaining components, with a view to aligning inputs across components. Doing so will leverage the potential impact of the proposed modifications on learners' ability to demonstrate the minimal proficiencies outlined in the GPF.

- b. **The leadership model to use.** The action plan needs to identify who will lead the ALIGN process. If the process uses a centralized leadership model, the plan must identify the lead entity. If the plan calls for a decentralized or distributed leadership model, it needs to identify the structures or partners responsible for leading or co-leading each component or subcomponent. Regardless of the leadership model adopted, the plan should specify the respective roles of different stakeholders (for example, MOE decision-makers or technicians, in-country technical partners, external resources, or agencies) in each step of the ALIGN process.
- c. **The timing of the ALIGN.** The plan needs to identify the timeline for the ALIGN review of each component or subcomponent and when findings will be available for review by decision-makers.
- d. **Resources available and required to support the ALIGN.** The plan needs to identify the resources required to conduct the review. These include the institutional resources (partner, MOE, and other para-statal entities) that need to be involved in the process, the institutional capacity (operational and leadership levels) that needs to be accessed or developed, the financial resources required to see the ALIGN through to completion and the technical resources necessary to support each step in the process.⁶
- e. **Desired outcomes of the ALIGN process.** The plan should clarify the desired outcomes for the ALIGN process, including how they will inform the education sector planning and implementation process.

Finally, although Step 1 logically precedes Step 2, in contexts where stakeholders are already familiar with the GPF and with systematic review processes, they may want to enter the ALIGN process at Step 2.

STEP 3: COLLECT DATA ON DEGREE OF ALIGNMENT OF SELECTED COMPONENTS; IDENTIFY GAPS, MISALIGNMENTS, AND OPPORTUNITIES

Step 3 focuses on data collection and analysis of participant responses related to the degree of alignment of existing pedagogical inputs to the knowledge and skills outlined in the GPF. This will allow them to identify gaps and areas of misalignment, and priority actions to address them.

This step should be primarily driven by those directly responsible for designing or delivering programming for the component(s) or subcomponent(s) in question. They bring a rich and nuanced understanding of issues and challenges related to specific components. Involving these individuals or structures in the data collection and analysis process will ensure that the analysis is informed and relevant.

⁶ As the GPF, which serves as the reference point for the comparative analysis process, is essentially a reading and mathematics assessment framework, it is essential that reading and mathematics curriculum experts lead the comparative analysis process for each component.

STEP 4: PRESENT IDENTIFIED OPPORTUNITIES AND GAPS TO DECISION-MAKERS

The final step in the ALIGN process is presenting the results of Step 3 to decision-makers. Presentations should focus on the degree of alignment of targeted component and subcomponent inputs with the GPF, at the national, subnational, and classroom levels, as appropriate. The presentation should identify priority initiatives to fill gaps at all three levels to ensure better alignment, both with the GPF and across targeted components. If the ALIGN process does not target all four components, the presentation should also include initiatives required to bring nontargeted components in line with targeted components.

Priority actions proposed should ideally align with medium and long-term priorities and commitments in ESP and partner-supported programs. This will ensure that the political, technical, and financial support required to implement the priority actions are available.

IV. IMPLEMENTING THE ALIGN PROCESS: THE PEDAGOGICAL COMPONENTS

This section examines in greater detail the *ALIGN for Minimum Proficiency* process for each of the four critical pedagogical components. The component-based discussions below follow a similar format. They begin by examining why it is essential to conduct a GPF-based alignment of the component. The discussion then examines potential foci for a GPF-based alignment. The section ends with a list of potential questions to guide the data collection and analysis process, and associated action points, depending upon the answers generated. Planners in the NFE and EiE sectors will want to consider multiple factors when thinking about the organization, timing, possible adaptations to questions, and data collection needs for their ALIGN process. These are outlined below, and throughout the component analysis descriptions, points are highlighted.



Important considerations for conducting an ALIGN for Minimum Proficiency process in NFE and EiE settings:

- Curriculum, teacher training programs, teaching, and learning materials and learner assessments in NFE and EiE settings are often not aligned with those of the formal system.
- NFE and accelerated learning (AE) program curricula target over-age learners. They also often group learners by ability level, rather than by grade level. Moreover, the curriculum used in AE programs may be a condensed version of the official MOE curriculum. All of this can make it challenging to align the learning outcomes of these programs to the grade-specific ones in the GPF.
- In the case of AE programs, before proceeding with the alignment process it is important to determine if the curriculum is expected to be aligned with the national curriculum or if there is an interim set of agreed-upon learning goals.
- In the case of refugee children, before proceeding with the alignment process, it is important to identify if learning inputs align with the curriculum of the home country or that of the host country. If it is the former, it will be difficult to include programs that target refugee children in a country's ALIGN process.
- Learners in NFE and EiE programs may not be assessed, or their assessments are not aligned with the MOE curriculum.
- NFE and EiE programs are often not part of the formal education system and hence do not receive MOE-issued TLMs. As a result, there is often a dearth of TLMs in these programs.
- Both NFE and EiE program teachers may not be part of the country's formal teaching force. They may be unqualified and/or their training program may reflect priorities specific to the populations they are teaching (i.e., social protection, well-being and/or conflict-sensitive actions with equal priority to foundational skills).
- When conducting an ALIGN process for NFE or EiE programs it is important to check the coherence and sequence of curriculum and materials used by the full range of community-based providers and non-governmental organizations serving the populations.

Planners in the NFE and EiE sectors will want to consider all of the above factors when thinking about the organization, timing, possible adaptations to questions, and data collection needs for their ALIGN process.

An example of an in-depth alignment of all pedagogical components is provided through Case Study #2. It is important to note that this process took nearly 18 months to complete.



Case Study #2 – Francophone Africa

A technical assistance partner was supporting the revision of the grades one to five reading curriculum and related curriculum standards in a francophone African country. The partner’s mandate also included revising the TLMs, teacher professional development, and preservice training. The MOE was interested in aligning all four components/subcomponents (curriculum, TLMs, preservice training, in-service training) to ensure a cohesive and coherent education system. At the time, the GPF was in the process of being finalized, but the MOE was eager to engage in the global initiative.

During the alignment process, the technical assistance team had the MOE examine the learning outcomes and performance descriptors in the draft and later finalized the GPF against their own French primary reading curricula. Where there were gaps, they incorporated the minimum proficiency reading skills into their curricula to ensure alignment. The MOE technicians also leveraged the GPF and reviewed curricula to align their learning assessments for reading so they could measure the key knowledge and skills in the GPF required for SDG reporting and ensure they were measuring skills learners would be taught. Using these aligned assessments, the partner led the MOE through policy linking workshops to set benchmarks for their grade two and grade five reading assessments, for both national and global reporting. Finally, the MOE drew upon the GPF to ensure in-service and preservice teachers were trained on how to teach these new reading skills. The entire alignment process was very hands-on and iterative, with strong collaboration between the MOE senior policymakers, relevant MOE departments, the implementing partners, USAID, and the World Bank.

A critical piece of the work was ensuring that MOE technicians fully understood the knowledge and skills outlined in the draft and later finalized GPF. The GPF is very precise, and some technical language used to describe learners’ performance on skills can be unfamiliar. The implementing partner used very practical examples and activities to help all involved develop a common understanding of grade-specific performance descriptors. The results of this alignment process were also continuously fed back to the expert group working to improve and finalize the GPF and the Policy Linking process for global rollout.

At the end of the process, the entire education system was aligned to the GPF and the final version of the GPF was enriched to include exemplar items developed by MOE technicians. An indicator of the MOE’s enthusiasm for the process is their recent decision to use the GPF to review the math curriculum.

COMPONENT I: CURRICULUM AND STANDARDS

Why a GPF-based curriculum ALIGN matters. The official, approved, or sanctioned curriculum (see definition of curriculum in the box below) is a natural entry point for an ALIGN process. That is because a curriculum communicates the expectations of an education system. It does so by outlining the specific knowledge, skills, and attitudes learners must demonstrate at crucial grade levels, and describing the sequence of learning, providing teachers with a picture of how learning is to unfold over time.

Critically examining the alignment between standards and curriculum on the one hand and the GPF on the other is essential. If learners are to demonstrate the minimum proficiencies described by the GPF, they need learning experiences that focus on these proficiencies. That is more likely to happen if the government-approved curriculum and curriculum standards address the same proficiencies.

Ideally, curriculum standards and the curriculum itself should provide a foundation for all other components. They should determine, for example, the nature of the TLMs provided to teachers and learners and the content of teacher preservice and in-service training programs. Finally, they should determine what and how teachers assess and what is assessed in national assessments.

Curriculum standards and the curriculum itself play a central role in ensuring a comprehensive, integrated learning program.

Focus of a curriculum based ALIGN process. The GPF summarizes the minimum mathematics and reading proficiencies that research suggests all learners in formal or nonformal education programs must be able to demonstrate, regardless of where they live or the language in which they are learning. It also outlines a research-based progression of how these proficiencies develop over time. Comparing curriculum expectations with those of the GPF can assist countries or programs in identifying divergences that may be compromising learners' progress. When conducting a GPF-based inquiry, decision-makers will want to consult the Policy Linking Toolkit to ensure the knowledge and skills that must be measured to report on SDG 4.1.1. are factored into deliberations.

A curriculum based ALIGN can include the national curriculum, state/provincial curricula, or curricula developed for specific formal or nonformal education programs. Undertaking an ALIGN of state/provincial curricula can allow decision-makers to identify modifications to better align curriculum expectations across states/provinces, ensuring that learners are held to the same standard, regardless of where they live or the language in which they are learning. The process can ultimately lead to the identification of common national curriculum standards that can then serve as the basis for future provincial or state curriculum revisions, and for the development of future TLMs.

The focus of a curriculum-based ALIGN, whether it is national, state/provincial level or program-focused, is twofold:



What we mean by “curriculum”

There are many definitions of the term “curriculum.” Some are broad. For example, Tyler (1957) and Popham and Baker (1970) define “curriculum” as all the learning experiences planned and directed by a school to attain its educational goals. Other definitions (Gagné 1967, McBrien and Brandt 1997) are narrower and more limited to the government-approved prescriptive, written description of what teachers should teach at each grade level. In this component, we use this narrower definition.

1. **To identify the degree of alignment of learning outcomes** with those of the content of the GPF (what teachers are to teach), i.e., the reading and mathematics knowledge and skills learners are expected to develop and demonstrate at specific grade levels.⁷
2. **To identify the alignment of the pacing and progression of learning over time** between the curriculum and the GPF.

An overview of the tasks that technicians will take on is outlined below, including important considerations during the course of this review.

I ALIGNMENT OF LEARNING OUTCOMES

The ALIGN process compares curriculum standards and learning outcomes to the minimal proficiencies outlined in the GPF. **The process results in the identification of:**

Commonalities, i.e., where the curriculum expects learners to be able to demonstrate the same knowledge and skills as outlined in the GPF, either at the same grade level or at a lower or higher one.

Differences, i.e., whether the curriculum expects learners to demonstrate learning outcomes that do not appear in the GPF or vice versa. *There will always be differences between a curriculum and the GPF, given that the GPF is not a comprehensive curriculum.*

- **Technicians should list the reading and mathematics knowledge and skills essential for the context and compare this list with the knowledge and skills listed in the GPF and in high-performing countries** that decision-makers feel are good models for the country or program in question. This can help validate the knowledge and skills included in the GPF, as well as assist countries or programs in identifying the knowledge and skills important in their context.
- **Technicians should read GPF descriptors and curriculum learning outcomes carefully, to support establishing commonalities and differences between the GPF and the curriculum.** A grade two GPF minimal proficiency descriptor for mathematics, for example, says that learners should be able to add and subtract within 20 (i.e., where the sum or the minuend does not surpass 20) and represent these operations with objects, pictures, and symbols. In determining commonalities and differences, it is critical to identify not only whether learners are expected to add and subtract to 20, but whether they are expected to represent their understanding in all three ways.



AS YOU SET UP THIS EXERCISE, KEEP THIS IN MIND. . .

1. **Curricula are jurisdiction specific.** A country's curricula outline the *critical knowledge, skills, and attitudes which its leadership believes* learners need to develop to be productive, socially engaged citizens. In some jurisdictions, for example, statistics and probability do not figure in the daily lives

⁷ A country may not have a stand-alone reading curriculum but include reading as a component or domain of a broader language arts curriculum. In such cases, the alignment is limited to that section of the curriculum.

of young children. For that reason, the mathematics curriculum may not introduce these concepts until upper primary or lower secondary. The GPF, however, outlines minimal proficiencies for probability and statistics beginning in early primary in line with many jurisdictions which view this as a global standard. Some jurisdictions have higher expectations of their learners, and national assessments confirm that their learners are routinely able to meet these higher expectations.

2. **The GPF is not a comprehensive curriculum.** It is first and foremost an assessment framework and as such outlines the important reading and mathematics knowledge and skills that learners must be able to demonstrate at specific grade levels, and that are easy to measure in large-scale assessments. It does not include all the reading or mathematics-related knowledge and skills that learners must be able to demonstrate, given their situation or context, nor does it address dispositional or attitudinal skills that are equally important, but hard to measure. What is essential is that decision-makers engage in a critical, research-based discussion of whether the differences identified between the GPF and the national curriculum are compromising or enhancing learners' progress and, if so, determine the modifications required to correct the situation.
3. **The reading proficiency levels recommended in the GPF apply to all learners, regardless of home language or language of instruction.** The GPF committee considered challenges associated with complex languages (such as Arabic) and language transition when suggesting reading proficiency levels by grade. It is presumed this process will encourage countries to interrogate whether the language policies in place contribute to proficiency gaps.
4. **A country's curricula may structure learning differently than it appears in the GPF.** Many elementary mathematics curricula, for example, do not group algebra-related learning outcomes under a domain entitled "algebra." That does not mean that they do not expect learners to develop algebra-related knowledge and skills. Often, the algebra-related learning outcomes appear in other curriculum sections, such as number and number operations or measurement. *When conducting an alignment, it is essential to read every GPF descriptor carefully and to identify where, if anywhere, it appears in the curriculum.*

2

PROGRESSION OR SEQUENCING OF LEARNING

A curriculum generally specifies the knowledge, skills, and attitudes learners must be able to demonstrate at specific grade levels. It also outlines a sequence and direction of learning, communicating how learners' understanding becomes increasingly more complex and sophisticated as they move up the grade levels.

Comparing the research-based progression of learning in the GPF to that proposed in the curriculum is important, for the simple reason that the pace of learning in some curricula can be erratic. Some concepts are addressed extensively or repeatedly. Others are examined in a cursory manner. In still other curricula, learners are introduced to a topic for the first time at a given grade level, despite not having had the opportunity to build a foundational understanding of the underlying concepts in previous grade levels. Often, curricula are overly ambitious, expecting learners to master advanced concepts and skills that research now suggests are beyond the cognitive abilities of learners at the grade level.

- **Technicians will look at how specific skills and sub-skills within a learning domain are taught over time.** Technicians will attend to the constructs and sub-constructs in the GPF, as well as the proficiency descriptors, to understand expectations by grade level in terms of performance. A facilitator may wish to assign learning domains to groups to examine how expectations progress across grade levels.
- **Technicians will review assessment tools and practice, if included in the curricula.** Some curricula include guidance on how teachers are to monitor learners' performance on targeted learning outcomes. The guidance can include specifying content standards or specific learning outcomes that teachers should evaluate, suggesting appropriate evaluation tools and activities, and providing rubrics or scoring guides to assess learners' work. Some curricula will also provide performance standards for critical outcomes or skills, for example, fluency performance standards for early primary, defined as the number of correct words per minute learners can read.

A curriculum based ALIGN should examine whether the assessment tools and practices outlined will provide teachers with information on learner performance on the minimal proficiencies in the GPF.



Comparing the pace of learning with the pace outlined in the GPF can help temper overly ambitious expectations and assist in outlining a more consistent, justifiable, and cognitively appropriate pace of learning. The comparison can also result in changes that ensure learners are provided with sufficient time to develop targeted skills as they move up grade levels.

Limitations of a reading curriculum based ALIGN. Learners' ability to demonstrate the minimal reading proficiencies outlined in the GPF is tied to policy-related issues such as the language of instruction. A curriculum based ALIGN will not provide data on the language of instruction. However, it will provide decision-makers with a vital opportunity to interrogate how their curriculum can better support learners to develop the minimal proficiencies in the GPF.

Case Study #3 demonstrates how a complicated curriculum review process was carried out in a country with multiple languages and a federated political system.

It is followed by guiding questions to use for a GPF-based curriculum ALIGN.



Case Study #3 – A Federated Political System with Multiple Languages of Instruction

A technical assistance partner was asked to support the development of a national evaluation framework for reading (NEFR) for a country with a federated political system. Each state has its own MOE responsible for coordinating educational planning and activities but running a federally developed curriculum. Languages of instruction vary by state, and states develop their TLMs and teacher training programs.

The Federal Ministry of Education under its curriculum agency decided to develop a NEFR to identify the minimum knowledge and skills learners should be able to develop at each grade level, regardless of the state in which they live and the language in which they learn. Once validated, the NEFR would serve as the reference for the development of revised curricula, TLM production, teacher training, book publishing, and assessment.

The technical assistance partner supported the process by bringing teams from each state together. Each state team included MOE curriculum representatives, linguistics experts, and master teachers. The GPF served as the reference point for discussions and debates. Each team responded to two key questions about each of the knowledge areas and skills listed in the GPF, namely: 1) if learners in their state should be able to demonstrate this knowledge or skill (i.e., was it an important skill in their context/language), and 2) if the knowledge or skill figures in their current curriculum. Teams also identified skills that do not appear in the GPF but that are important for their context, for example attitudinal skills or skills important for specific languages. The debates and deliberations that ensued allowed the states to come to agreement on the minimal knowledge and skills learners should be able to demonstrate at each grade level, regardless of where they live or the language they speak. Those decisions are contained in the new NEFR. Each state also identified the changes they need to make in their current curriculum to bring it into alignment with the NEFR.

CURRICULUM-BASED ALIGN FOR MINIMUM PROFICIENCY

POTENTIAL GUIDING QUESTIONS	POTENTIAL ACTION POINTS
<p>1. Content of the standards/ curriculum: Do the minimum proficiencies outlined in the GPF appear in the standards/curriculum? If so, which ones? Do they appear at the same general grade level?</p> <p>Are there learning outcomes that appear in the curriculum that do not appear in the GPF? Which ones?</p>	<p>If yes, and learner performance on international indicators aligns with national aspirations, no action required.</p> <p>If yes, but learner performance on international indicators is lower than expected or desired, consider conducting an <i>ALIGN</i> on other related pedagogical components (teacher training, TLMs) or collecting data on the degree to which teachers implement the curriculum as intended in the classroom, or on other facts that affect learner performance (attendance, time on task, socioeconomic factors, nutrition, SEL, etc.).</p>
<p>2. Progression and pacing of the curriculum: Do the progression and pace of learning align with the research-based progression and pace of learning in the GPF? Where do the progressions and pacing align? Where do they diverge?</p>	<p>If no, and if decision-makers consider it problematic, identify actions to address identified misalignments:</p> <ul style="list-style-type: none"> • At the policy level, in future curriculum revisions • In the classroom, over the short term • In future national and classroom-based assessments • In teacher training programs
<p>3. Assessment: If the curriculum includes assessment tools and practices, do they measure learner performance on the minimum proficiencies outlined in the GPF? Which ones?</p> <p>Do they measure learner performance on learning outcomes that do not appear in the GPF? Which ones?</p>	<p>If yes, no action required.</p> <p>If yes, but learner performance on international indicators is lower than expected or desired, consider conducting an <i>ALIGN</i> on other related pedagogical components (teacher training, TLMs) or collecting data on the degree to which teachers implement the curriculum as intended in the classroom, or on other facts that affect learner performance (attendance, time on task, socioeconomic factors, nutrition, SEL, etc.).</p> <p>If no, and if decision-makers consider it problematic, identify actions to address misalignments:</p> <ul style="list-style-type: none"> • At policy level, in future curriculum revisions • In the classroom, over the short term • In future national and classroom-based assessments • In teacher training programs

CURRICULUM-BASED ALIGN FOR MINIMUM PROFICIENCY

POTENTIAL GUIDING QUESTIONS	POTENTIAL ACTION POINTS
<p>The following questions flow naturally from a curriculum based <i>ALIGN</i>. It may be necessary to conduct a secondary analysis to generate appropriate data. Some questions address other pedagogical components but are included here to underscore the interconnectedness of the components.</p>	
<p>4. Does the curriculum dedicate sufficient instructional hours⁸ per week (based on international findings) to each discipline to support the development of the minimum proficiencies outlined in the GPF?</p>	<p>If yes, identify actions to ensure time is being used efficiently and optimally.</p> <p>If no, and if decision-makers consider it problematic, identify:</p> <ul style="list-style-type: none"> • Short-term actions to increase instructional time • Medium- or long-term actions to ensure increased instructional time is embedded in policy decisions (<i>ESP, Revision of Curriculum, Revision of timetable, etc.</i>)
<p>5. Does current ESP include targets for the percentage of learners at all levels (early primary, late primary, lower secondary) meeting or exceeding minimum proficiency levels in reading and mathematics?</p>	<p>If yes, identify actions to ensure progress is measured and reported regularly.</p> <p>If no, and if decision-makers consider it problematic, identify actions to embed learning targets in educational policy documents (<i>ESP, annual performance plans, regional or school-based learning outcomes improvement plans, etc.</i>)</p>
<p>6. If educational planning includes targets, does the definition of meeting or exceeding minimal proficiency included with the target align with that of the GPF?</p>	<p>If yes, no action required.</p> <p>If no, and if decision-makers consider it problematic, what actions need to be taken to align definitions?</p>

⁸ There is no set optimal number of hours of instruction that will maximize student learning at different grades levels. That is because how instructional time is used is as important as the number of hours allocated. However, if learners do not have access to sufficient instructional time, their learning will suffer. Countries may be interested in comparing the amount of instructional time they devote to these two subjects to tendencies in other countries. The [2019 TIMSS report](#), for example, lists the percentage of instructional time participating countries allocated to mathematics instruction in grades four and eight. The [2016 PIRLS study](#) provides the same comparison for overall language instruction and for reading.

COMPONENT 2: TEACHING AND LEARNING MATERIALS

Why a GPF-based TLM ALIGN matters. Even more than the official curriculum, textbooks and other TLMs frame teachers' instructional decisions (Krammer 1985; Schmidt et al. 2001; Törnroos 2005). TLMs act as mediators between the official curriculum and the curriculum implemented by teachers (Valverde et al. 2002). They identify the topics teachers are to teach (Krammer 1985; Schmidt et al. 2001) and the order in which they are to teach them. TLMs also describe how teachers should teach each topic and how much time they are to spend on each one (Schmidt et al. 2001). All of this has a direct impact on learning outcomes. Not surprisingly, there is a correlation between the nature of TLMs and learning outcomes (Schmidt et al. 2001; Törnroos 2005).

A TLM-based ALIGN recognizes the pivotal role TLMs play in teachers' instructional decision-making and, by extension, learners' ability to develop the minimum proficiencies outlined in the GPF. Learners are more apt to develop these proficiencies if TLMs provide them with appropriate learning activities. Doing a comparative analysis of the focus of the learning activities in TLMs and the minimal proficiencies in the GPF can help identify potential instructional gaps. Also, an analysis of the TLM can offer important insights on whether the national curriculum emphasizes the requisite skills needed to ensure mastery of certain concepts.



Be sure to review not just textbooks, but supplementary reading materials, manipulatives, and measurement tools. Collect as complete a sample of available TLMs as possible.

A TLM-based ALIGN generally focuses on the same two aspects as a curriculum-based ALIGN, namely:



CONTENT

A content review examines the reading⁹ and mathematics knowledge and skills that learning activities address, whether they appear in the GPF, and if so, at what grade level.

- **Technicians will do a comparative analysis that identifies the GPF minimum proficiencies** addressed at each grade level and the amount of instructional time devoted to each.



AS YOU SET UP THIS EXERCISE, KEEP THIS IN MIND. . .

1. **Consider the utility of the GPF minimum proficiency descriptors.** The descriptors will help analysts identify if associated TLM learning activities cover all the expected knowledge and skills. The grade two GPF minimum proficiency descriptor for mathematics previously referenced requires learners to be able to add and subtract within 20 (i.e., where the sum or

⁹ A country may not have stand-alone reading materials for all grade levels. Reading materials may be incorporated into language resources that target all aspects of language development, including, for example, writing, language functions, and vocabulary. In such cases, the TLM alignment is limited to the portion of the materials that focus on reading.

the minuend does not surpass 20) and to represent these operations with objects, pictures, and symbols. When doing a TLM ALIGN, it is essential to identify whether the learning activities provide learners with experience representing additions and subtractions in all three ways.

2. **Multiple skills will be addressed in a TLM activity.** A singular reading passage, for example, may require learners to retrieve information and then to interpret it. The GPF lists these proficiencies under two different constructs. The same is true of mathematics. A mathematics problem, for example, may require learners to access knowledge and skills listed under the number and number operations domain and under the algebra domain.
3. **The diversity of reading activities should cover the depth and breadth of skills reflected in the GPF.** It is essential to compare the length, level of difficulty, and types of reading passages in the TLMs to the technical specifications for grade-level texts in the annex to the reading GPF. The comparative analysis will indicate whether the TLMs adequately equip learners to read and understand the type of texts referenced in the GPF. It is also essential to analyze the number of different texts learners read at each grade level to determine if the volume is sufficient to develop the minimal proficiencies outlined in the GPF.

2

PROGRESSION OR SEQUENCING OF LEARNING OVER TIME

TLMs not only indicate what teachers should teach, they sequence learning, indicating the order in which teachers should introduce knowledge and skills and the amount of time they should spend on each. One of the major benefits of this GPF-based ALIGN process is the references the GPF provides to help facilitators interrogate learning progressions in the TLMs.

- **Technicians will identify whether learning activities follow research-based learning progressions, i.e.,**
 - If they provide learners with cognitively appropriate learning activities for their grade/age.
 - If they sequence learning appropriately, so activities become increasingly complex and sophisticated over time.
 - If they spend an adequate amount of time on key knowledge and skills.



TLMs in NFE programs or emergency settings are often limited. This may limit the value of a GPF-based TLM analysis. If there are TLMs, because NFE and EiE programs are often not part of an MOE program, the TLMs may be aligned with the goals of the specific NFE program and not those of the MOE curriculum. However, if there is an *Accelerated Education* program which uses a condensed version of the official MOE curriculum, and TLMs reflect that, a GPF-based ALIGN would be very pertinent.

Comparing the progression and pacing of learning proposed in TLMs with that outlined in the GPF can identify potential contributors to learner underperformance.

- **Technicians will review tools and practices used in TLMs to assess learner progress.** A TLM-based ALIGN should examine whether the assessment's proposed practices measure learners' performance on minimum proficiencies in the GPF and, if so, if the results allow teachers to clearly and empirically differentiate between learners who meet the minimum proficiencies for their grade levels and those who require additional support. Ideally, TLMs will

provide targeted remediation activities for underperforming learners and enrichment activities for those who exceed minimal proficiencies. Component 4 (Assessment) discusses the alignment of classroom-based assessment practices with the GPF in further detail.



AS YOU SET UP THIS EXERCISE, KEEP THIS IN MIND. . .

Differences between the TLMs and the GPF performance descriptors. TLMs generally reflect curriculum guidelines on the content addressed and the sequencing and pace of learning. That means if a curriculum does not address some of the knowledge and skills in the GPF, associated TLMs will probably not address them either. Or, if the curriculum's progression or pace of learning misaligns with the GPF's, there should be misalignment with the TLMs. The discussion that follows the presentation of the TLM-based ALIGN can provide decision-makers with an opportunity to examine the implications of any gaps or misalignments for learners' performance.

Limitations of a TLM-based ALIGN process. A TLM-based ALIGN looks primarily at the quality of the TLMs and specifically whether the proposed learning activities are sufficient for learners to develop the minimum proficiencies outlined in the GPF. The analysis will not generate data on other essential aspects of TLMs that correlate with learning outcomes. These include, for example, whether the TLMs are available in sufficient numbers in all classrooms, whether teachers and learners use them frequently and as intended, or in the case of technology based TLMs, if schools have the resources required to support their use. However, examining the results of a TLM-based ALIGN may prompt decision-makers to delve into these aspects, especially if there is a relatively high level of alignment between the TLMs and the GPF, but learners' performance on the GPF minimal proficiencies is less than optimal.



Case Study #4 – Sub-Saharan Africa

During a curriculum review process, an MOE contracted a technical assistance partner to develop new reading and mathematics TLMs for grades one to three. Prior to starting production, the partner engaged MOE technicians in a review of the draft curriculum to ensure it reflected the Ministry's desire to align future curricula and learning materials to international trends and standards. Technicians compared the knowledge and skills outlined in the draft curriculum, and the progression of learning across grade levels with that of the GPF, the curricula of countries that scored high on the last grade four TIMSS, and of countries in the region identified as appropriate points of comparison.

The triangulation exercise led the MOE to realize that traditional mathematics TLMs for primary do not include probability and algebra. These domains were absent from the draft curriculum because the MOE felt that young children are unable to tackle such concepts. The partner had technicians examine the nature of the early primary probability and algebra learning outcomes specified in the GPF and in the other curricula examined. The partner also had technicians identify how probability-related concepts surface in daily life in the country and provided them with examples of the types of grade-appropriate probability learning activities early primary learners traditionally engage in. Armed with that information, the MOE decided to include probability (and algebra) in the new TLMs, and in the draft curriculum. The triangulation activity also encouraged the MOE to adjust the progression of learning for some key concepts in the TLMs and in the new curriculum. As a result of the discussions, the new TLMs and the draft curriculum are aligned to international research and standards.

TEACHING AND LEARNING MATERIALS-BASED ALIGN FOR MINIMUM PROFICIENCY

POTENTIAL GUIDING QUESTIONS	POTENTIAL ACTION POINTS
<p>1. Content of the TLMs:</p> <p>Are the knowledge and skills outlined in the GPF addressed in the TLMs? Are they addressed at the same general grade level?</p> <p>Do the reading TLMs contain texts of a similar genre and similar length and level of difficulty to those proposed in the annex of the reading GPF for the targeted grade level? Is the number/volume of different texts sufficient to develop fluency and reading comprehension skills?</p>	<p>If yes, no action required.</p> <p>If yes, but learner performance on international indicators is lower than expected or desired, consider:</p> <ul style="list-style-type: none"> • Conducting an ALIGN on the teacher training component • Collecting data on the degree to which the TLMs are available in classrooms and used as intended • Collecting data on teachers' knowledge of important curriculum knowledge and skills, <i>or</i>: • Collecting data on their ability to implement evidence-based instructional practices to support the development of targeted knowledge and skills
<p>2. Progression and pacing of the learning in the TLMs:</p> <ul style="list-style-type: none"> • Does the progression and pace of learning within and across grade levels align with the GPF progressions and pace of learning? • Are activities sequenced so they become gradually more complex for the learner? • Is the amount of time allocated to the different proficiencies outlined in the GPF sufficient for learners to demonstrate GPF the minimal proficiency for that grade level? 	<p>If no, and decision-makers consider gaps or misalignments to be problematic, identify actions to address them:</p>
<p>3. Assessment:</p> <p>Do the TLMs include classroom-based summative and formative assessments, as well as learner self-assessment tools, to measure progress on grade-specific curriculum standards or learning outcomes? If so:</p> <ul style="list-style-type: none"> • Are the tools valid, reliable, and easy to use? • Can the results be used to reliably differentiate between learners meeting and not meeting minimum performance levels? • Can the results diagnose learning gaps contributing to low performance? • Do the TLMs contain targeted remediation materials to address these learning gaps? 	<ul style="list-style-type: none"> • In the classroom over the short term, including in the case of new or supplemental materials, that teachers and learners receive them and use them with fidelity, and in the case of new assessment materials, that they use the results to identify and direct additional resources to learners not meeting minimal expectations • During the development of new TLMs, <i>or</i>: • In teacher training programs

COMPONENT 3: TEACHER TRAINING

Why a GPF-based teacher training ALIGN matters. Teachers' instructional decisions have a more significant impact on learning outcomes than TLMs or specific pedagogical or instructional approaches (Allington & Johnston 2001; Darling-Hammond 1999; Pressley et al. 2001; Popova et al. 2018). Investing in high-quality preservice and in-service teacher education is one of the most evidence-based means of improving learning outcomes (Allington 2002).

Because teachers' instructional decisions have such a bearing on learning outcomes, teachers need to be aware of the critical knowledge and skills learners need to be able to demonstrate at crucial grade levels, how learners' understanding develops over time (learning progressions), and the evidence-based reading and mathematics instructional practices that support understanding.

Focus of a teacher training based ALIGN. A teacher training based ALIGN would ideally focus on three subcomponents:

- **Teacher preservice programs**, i.e., the curricula and learning experiences that determine what teachers learn about effective mathematics and reading instruction *prior to entering the profession*.
- **Teacher in-service programs**, i.e., the curricula and learning experiences provided to teachers during face-to-face trainings (workshops, professional development days, teacher learning circles) and in-school coaching and mentoring sessions.
- **School instructional leadership programs**, i.e., the curricula and learning experiences provided to develop principals', head teachers', mentors', and coaches' *instructional leadership skills*.



Teachers in NFE programs or emergency settings often haven't benefited from extensive training. The training they receive is often more focused on general teaching methodology, child protection, and aspects of psychosocial support and social and emotional learning than evidence-based reading or mathematics teaching practices. Given that, a GPF-based teacher training ALIGN process for NFE or EiE may identify considerable gaps. That said, the process could be valuable in assessing the coherence and structure of teacher training and professional development supports, as well as the alignment of the content of these supports to foundational reading and mathematics knowledge and skills.

For each case above, the technicians will review the content of the training provided, as well as the duration and the modalities used in teacher training and supervision programs.

Content of trainings and supervision protocols. The ALIGN process needs to determine the extent to which preservice and in-service programs are building teachers' (and instructional leaders') understanding of the critical knowledge and skills learners need to become autonomous readers and effective mathematical problem-solvers. Comparing the knowledge and skills addressed in training curricula and supervision protocols with those outlined in the GPF provides a preliminary indication of the degree to which teachers are being made aware of and equipped to develop those skills in young learners.

A teacher training ALIGN should focus on two aspects identified as critical to effective reading and numeracy instruction (Mishra & Koehler 2006; Kim et al. 2016):

1. **Content knowledge**, i.e., *knowledge of the concepts in the curriculum*. Content knowledge is essential for two reasons: 1) teachers cannot help children learn things that teachers themselves do not understand (Ball 1991, p. 5), and 2) the depth and breadth of teachers' content knowledge influence how they teach (Grossman 1990, Wilson & Wineburg 1988) and pupils' learning outcomes (Sadler et al. 2013, Hill et al. 2005). The stronger teachers' content knowledge, the better learners perform on learning assessments.

In the case of reading, content knowledge includes knowledge of the language of instruction, including teachers' fluency in the target language, their knowledge of the language's structures and orthography, their knowledge of the local culture, and finally, their knowledge of the different domains of reading and the interaction between them. For mathematics, content knowledge includes understanding the mathematical concepts targeted in the curriculum and how the curriculum organizes those concepts into domains.

2. **Pedagogical content knowledge** (or in the case of mathematics, mathematical knowledge for teaching), i.e., *how to teach reading or mathematics*. This includes understanding how children learn to read or develop mathematical understanding, how skills develop over time (i.e., learning progression or trajectories), how to best structure learning activities in each discipline—including how to scaffold learning, so learners develop increasingly more complex knowledge and skills. It also includes how to best present concepts to learners (Ball et al. 2005), and knowledge of evidence-based instructional practices that support the development of strong skills (Kim et al. 2016; Schoenfeld 1998, 2002; Timperley et al. 2007).

Teachers who possess pedagogical content knowledge know how to adapt learning activities for learners with learning and sensory disabilities¹⁰ and support the transition from learning in the mother tongue to learning in a second language, including how to use bilingual scaffolding to support learning. They also know how to use instructional technologies effectively, including assistive technologies, and assess learner performance.

Limitations of a teacher training based ALIGN. There are many factors that influence teachers' classroom decision-making about how to support learners. *It is anticipated that targeted complementary analysis will need to be considered to inform evidence-based decisions on how to improve teacher and school administrator practices with respect to boosting minimum proficiency.* The factors and potential additional research needs are provided on this next page, to enable planners to discuss whether and how they will want to integrate other targeted gap analyses with broader teacher training based ALIGN efforts.

¹⁰ For information on adaptations for learners with learning and sensory disabilities, see [Universal Design for Learning to Help All Children Read: Promoting Literacy for Learners with Disabilities](#) (edu-links.org).



COMPLEMENTARY ANALYSIS

The enacted curriculum – Given the strong correlation between teacher classroom decision-making and learning outcomes, it will be advantageous to include additional analyses like whether teachers use classroom instructional practices presented during trainings, or the extent to which they use available TLMs and use them as expected. The [Surveys of Enacted Curriculum](#) guidance provides useful data collection tools.

Other school leadership practices – Decision-makers interested in identifying other underlying causes of learner underperformance should consider that instructional leadership practices account for approximately one-quarter of all school-based effects on learning outcomes (Leithwood et al. 2004). As a complementary gap analysis to the ALIGN process, technicians may want to collect data on the extent to which head teachers, principals, or other supervisors routinely implement evidence-based leadership practices and whether the level of contact hours for continuous professional development are sufficient. For a list of some of these practices, see [Universal Design for Learning to Help All Children Read: Promoting Literacy for Learners with Disabilities](#), pp 35–37.

Duration and focus of the trainings provided – An in-service program that is sustained over time and offers multiple opportunities for teachers to focus on a set of common concepts or instructional practices has a higher chance of transforming teaching practices and, by extension, pupil learning (Darling-Hammond et al. 2017). Decision-makers interested in identifying additional factors contributing to learner performance may want to examine the duration of in-service trainings provided and their focus.

Training modalities used – The types of training modalities used may not be sufficient to support and sustain changes in teacher practices. The optimal in-service program, which results in the greatest pupil learning gains, combines face-to-face workshops with follow-up coaching and mentoring (Joyce & Showers 1982; Cilliers & Taylor 2017). That is because teachers who receive coaching or mentoring in addition to face-to-face trainings are more likely to try out targeted instructional practices and implement them correctly than teachers who do not (Showers et al. 1996; Neufeld & Roper 2003; Knight 2004; Kohler et al. 1997, quoted in Darling-Hammond et al. 2017, p. 13). For the reasons outlined above, a teacher training-based ALIGN may want to examine the extent to which teachers benefit from ongoing coaching and mentoring in addition to face-to-face trainings, and whether the focus of both training modalities is on strengthening teachers' content and pedagogical content knowledge. For a review of the literature on effective coaching and mentoring practices, see [Towards the Design and Implementation of Comprehensive Primary Grade Literacy and Numeracy Programs](#). USAID. 2019.

TEACHER TRAINING-BASED ALIGN FOR MINIMUM PROFICIENCY

POTENTIAL GUIDING QUESTIONS	POTENTIAL ACTION POINTS
<p>I. Preservice training:</p> <ul style="list-style-type: none"> • Do the preservice syllabi cover all the domains of the GPF? • Is sufficient instructional time dedicated to developing teachers’ content knowledge in reading and mathematics (see above description)? How much time does the program dedicate to this? What concepts does it / does it not address? • Is sufficient time dedicated to developing teachers’ pedagogical content knowledge (see above description)? How much time does the program dedicate to this? What concepts does it / does it not address? • Is there a separate preservice program on reading instruction (instead of courses on language acquisition or language instruction in general)? Are preservice teachers expected to specialize in reading or mathematics, or are they “generalists” in primary level instruction? • Do preservice instructors have sufficient training in evidence-based reading and mathematics instructional practices (including multilingual education) to offer a rich training program? Do preservice programs have learning resources and facilities to help instructors nurture young teachers in the above? • Are preservice teachers offered authentic practicum experiences, encouraged to implement evidence-based instructional practices, and evaluated on their content and pedagogical content knowledge in reading and mathematics? 	<p>Potential data collection foci:</p> <p>1) Conduct a syllabus document review and triangulate through interviews with instructors responsible for coursework to determine:</p> <ul style="list-style-type: none"> • The overall focus on reading and mathematics instructional practices, and the extent to which they align with GPF knowledge and skills • Gaps in structure and content (GPF domains and learning progressions, content pedagogy, related classroom assessment practices) • Learning resources and facilities <p>2) Review preservice and classroom teacher assessments of content knowledge to understand gaps in GPF domain knowledge.</p> <p>3) Observe a sample of practica—consider whether practica evaluate for teachers’ mastery of content knowledge, content pedagogy, and classroom assessment practices related to GPF domains.</p>
<p>2. Face-to-face in-service training (workshops, professional development days, professional communities, etc.):</p> <ul style="list-style-type: none"> • Is time dedicated to developing teachers’ content knowledge in reading and mathematics (see above description)? What concepts does 	<p>Potential data collection foci:</p> <p>Conduct a document review of in-service teacher training documents and triangulate through interviews with facilitators responsible for delivering the trainings to identify:</p>

TEACHER TRAINING-BASED ALIGN FOR MINIMUM PROFICIENCY

POTENTIAL GUIDING QUESTIONS	POTENTIAL ACTION POINTS
<p>the training address? Which ones does it not address?</p> <ul style="list-style-type: none"> • Is time dedicated to developing teachers’ pedagogical content knowledge (see above description)? What concepts does the training address? Which ones does it not address? • Do teachers have time to practice new instructional practices during face-to-face trainings? • Is sufficient face-to-face training time dedicated to having teachers understand how to use TLMs effectively? • How much time do the face-to-face trainings dedicate to having teachers understand how to assess learning? 	<p>1) That the overall focus is on:</p> <ul style="list-style-type: none"> ○ Building the knowledge skills reflected in the GPF, including the learning progression (including real world mathematics, reading to learn) ○ The evidence-based instructional practices that support the development of the targeted knowledge and skills, including a) the use of appropriate learning technologies (texts, manipulatives, delivery tools, etc.), and b) language of instruction and assessment best practices, and c) differentiated instruction strategies <p>2) Gaps in structure and content, when compared to the GPF (GPF domains and learning progressions, content pedagogy, related classroom assessment practices)</p> <p>3) Observe a sample of trainings to identify the focus and quality of trainings.</p>
<p>3. Mentoring and coaching programs:</p> <p>Do teachers benefit from a school based CPD program that:</p> <ul style="list-style-type: none"> • Introduces them to the key knowledge and skills learners must be able to demonstrate • Supports them to introduce evidence-based instructional practices to support learner development • Helps them use available TLMs efficiently and as intended • Helps them evaluate learner performance with respect to key knowledge and skills • Helps them identify and use remediation activities to fill identified gaps 	<p>Potential data collection foci:</p> <p>1) Conduct a document review of mentoring or coaching training materials and guides and triangulate through interviews with mentors or coaches to identify:</p> <ul style="list-style-type: none"> • Focus of coaching sessions on knowledge and skills necessary for minimum proficiency • Gaps in focus, when compared to the GPF (GPF domains and learning progressions, content pedagogy, related classroom assessment practices) • Frequency of mentoring and coaching visits¹¹ <p>2) Observe a sample of coaching or mentoring to identify the focus and quality of sessions, compared with program guidelines.</p>

¹¹ There is no set standard for the periodicity of coaching, but it should be expected that the government is allocating funding for coaches to support underperforming districts or schools with greater frequency.

TEACHER TRAINING-BASED ALIGN FOR MINIMUM PROFICIENCY

POTENTIAL GUIDING QUESTIONS	POTENTIAL ACTION POINTS
<p>4. School instructional leadership programs:</p> <p>Are school administrators and supervisors trained and expected to serve as instructional leaders who:</p> <ul style="list-style-type: none"> • Set and monitor district or school-level proficiency targets (for agreed grade levels). • Use classroom assessment results (growth data) and coaching data to inform the district’s in-service professional development plans, and/or school-level intensive support strategies • Ensure that teachers receive ongoing coaching as well as mentoring in evidence-based reading and mathematics practices, with a focus on closing proficiency gaps within classrooms and improving learner growth. • Ensure language of instruction aligns with language used for classroom assessments • Ensure availability in schools of teaching and learning materials that are level-appropriate and support evidence-based instruction. • Factor extra instructional time into the daily or weekly school schedule to enable teacher support for lower performing learners. • Support teachers in improving their instructional practice. • Implement other evidence-based leadership practices that improve learning results 	<p>Potential data collection foci:</p> <p>1) Conduct a document review of school instructional leadership training materials and guides and triangulate through interviews with head teachers or principals to identify:</p> <ul style="list-style-type: none"> • Focus of training sessions • Gaps in focus, when compared to the GPF (GPF domains and learning progressions, content pedagogy, related classroom assessment practices) and items listed at left <p>2) Conduct school visits to gather evidence on implementation of evidence-based leadership practices.</p>
<p>For all components of teacher training:</p> <p>If most of the answers to the questions are yes, based on the data collected above, no action is required related to the content.</p> <p>If most of the answers are yes, but learner performance is lower than expected or desired, consider conducting an <i>ALIGN</i> process on curriculum or TLM, or collecting supplementary data on:</p> <ul style="list-style-type: none"> • The degree to which the TLMs are available in classrooms • The degree to which they are used as intended • Teachers’ ability to implement evidence-based instructional practices as intended • School-based leaders’ use of evidence-based instructional leadership practices <p>If most of the answers are no, and decision-makers consider it problematic, identify actions to address issues.</p>	

COMPONENT 4: ASSESSMENT

Why a GPF-based assessment ALIGN matters. International indicators like SDG 4.1.1 commit countries to reporting the percentage of learners meeting minimum reading and mathematics proficiency levels defined in the GPF. Most countries measure learner performance using national assessments linked to curriculum-specific standards or learning outcomes. For a national assessment to measure curriculum outcomes and at the same time provide data for reporting on international indicators, there must be sufficient alignment between the assessment and the GPF.

Focus of a national assessment based ALIGN. A national assessment should measure learner performance on national curriculum standards. These standards identify the critical knowledge and skills learners must be able to demonstrate at key points in their learning trajectory. They constitute the cornerstone of a curriculum and the framework for developing it.

A national assessment based ALIGN focuses on the level of alignment between the knowledge and skills outlined in the GPF and those measured by the assessment. The ALIGN is ideally conducted during the assessment development phase when evaluation and curriculum specialists identify the priority standards (knowledge and skills) the assessment must measure. By confronting this list with the knowledge and skills in the GPF, an ALIGN can determine if there is sufficient breadth and depth of alignment to support the use of policy linking for international reporting. For a complete discussion of how to determine the depth and breadth of the alignment of a national assessment to the GPF, see the tables in the Policy Linking Toolkit which reference minimum alignment requirements for international indicator reporting.¹²

A national assessment-based ALIGN will provide decision-makers with a clear indication of the adaptations or modifications required so countries can use national assessments for international reporting. Adaptations or modifications can include, for example, modifying existing items to address a greater breadth of sub-constructs, constructs, or domains, or increasing the depth of the alignment by having more items measure the specific knowledge and skills outlined in the GPF. The goal is to introduce these modifications without compromising the primary goal of a national assessment, namely, to report on learner performance with respect to curriculum standards. National assessment based ALIGNs will also provide curriculum developers with valuable information for developing future curricula, including how to better align future curricula with international research on mathematics and reading learning and teaching, as well as global curriculum and assessment trends.¹³



Learners in NFE and EiE programs may not be properly assessed due to diverse circumstances (resources, learner retention issues, conflict and crisis), **or the assessments may not align** with the MOE curriculum. Some NFE programs do not result in recognized certification. Although it may be possible to apply the *ALIGN* to learner assessments when learners are following a MOE-approved NFE program, a GPF-based ALIGN process with diverse providers in other NFE and EiE contexts may expose fundamental differences in assessment protocols across programs and with the GPF as an assessment framework.

¹² See the [Policy Linking Toolkit](#) for a more complete description of assessment requirements.

¹³ A national assessment may be aligned with the GPF in that it measures the key domains and skills. However, if the assessment is not also submitted for psychometric analysis (item analysis) prior to administration, the results may not have the level of reliability or validity required to make, with confidence, decisions about the quality of learning.

Applying the ALIGN process to subnational assessments. Although this section focuses primarily on national assessments, curriculum and assessment are the responsibility of state or provincial governments in some countries, not the national government. Subnational assessment ALIGNs can ensure that state- or provincial-level assessments meet minimum requirements for international reporting. Conducting ALIGNs at the state/province level has two additional benefits. First, they can identify modifications to align state or provincial curricula with each other and with global research and curriculum trends. Second, if state- or provincial-level assessments align with the GPF, and policy linking is used to determine the percentage of learners meeting the minimum GPF proficiency descriptors, it is possible to compare results across states or provinces.

Applying the ALIGN process to decentralized assessments. Finally, many countries have adopted decentralized education management structures and transferred responsibility for monitoring learner performance to these structures, often via locally developed end-of-term or end-of-year assessments. Using a common assessment framework—either a national assessment framework linked to the curriculum or the GPF—to develop these assessments and interpret the results can bring much-needed coherence to the assessment process. It can also ensure that learners are held to the same performance standard, regardless of where they live. In addition, if the performance descriptors in the curriculum assessment framework align with those of the GPF, the results of the decentralized assessments can provide decision-makers with an indication of learner performance on international indicators between large-scale national assessments. The tools used to measure learner performance should be valid, the data reliable, and the administration must respect standardized protocols.

Applying the ALIGN process to classroom-based assessments. National or subnational assessments provide a valuable picture of learners’ reading and mathematics performance at specific points in time. However, they do not improve learner performance. Performance improves when teachers regularly assess the degree to which learners meet essential curriculum standards, identify underperforming learners, and direct targeted support to them (Graham et al. 2015; Sanchez et al. 2017). Teachers are more likely to engage in these practices if:

- They receive valid and easy-to-use tools to assess learner performance against key standards.
- Teachers’ assessment literacy is improved through preservice and in-service programs. Teachers need to be able to score and interpret results correctly before using them for remedial teaching.
- They receive targeted intervention activities to support learners not meeting the standards.
- Time is built into the timetable for them to use the tools and implement remediation activities.
- Teachers have means to share results and to engage in joint problem-solving to improve results.



AS YOU SET UP THIS EXERCISE, KEEP THIS IN MIND. . .

Importance of national targets for improving reading and mathematics performance. An essential means of monitoring educational quality is to establish national targets for the percentage of learners meeting or exceeding reading and mathematics minimal expectations at crucial grade levels and embed those targets in national policy documents like the ESP. Decision-makers should accompany targets with a clear, objective, and measurable description of the performance learners need to demonstrate to “meet or exceed minimal expectations” in these two foundational areas. Aligning that definition with the minimal proficiencies in the GPF will align national reporting with international reporting.

POTENTIAL GUIDING QUESTIONS FOR AN ASSESSMENT-BASED ALIGN

QUESTIONS	POTENTIAL ACTION POINTS
<p>1. Curriculum standards and benchmarks (overlap with Curriculum component)</p> <p>Does the curriculum outline clear, grade-specific standards or learning outcomes against which to measure learner performance?</p>	<p>If yes, to what extent do the standards align with GPF minimum performance descriptors? (<i>Overlap with Curriculum component</i>)</p> <p>If no, and decision-makers consider it problematic, what actions can be taken to develop such standards or learning outcomes, embed them in policy, and ensure they are communicated to and used by all stakeholders.</p> <p>If no, and decision-makers do not consider their absence problematic, no action is necessary.</p>
<p>2. National and subnational assessments</p> <p>Are existing or proposed assessments sufficiently aligned, in terms of breadth and depth, to be used for international reporting? (<i>See the Policy Linking Toolkit for minimal breadth and depth of alignment for international reporting</i>).</p>	<p>If yes, no action is required.</p> <p>If no, and decision-makers consider gaps or misalignments problematic, identify:</p> <ul style="list-style-type: none"> • Modifications or additions to planned or existing assessments to ensure sufficient alignment for international reporting purposes, while at the same time respecting the need to report performance with respect to curriculum expectations • What potential changes need to be made to curriculum standards, or to the curriculum itself, to ensure learners can demonstrate the minimum proficiencies <p>If no, and decision-makers do not consider this to be problematic, no action is necessary.</p>
<p>3. State or province-specific subnational assessments</p> <p>Do states or provinces measure learner performance against a common set of standards? Are the assessment items of comparable level of difficulty? (<i>Overlap with Curriculum component</i>)</p>	<p>If yes, no action is required.</p> <p>If no, and decision-makers consider this to be problematic, what actions can be taken:</p> <ul style="list-style-type: none"> • To develop a common set of standards for reading and mathematics, and new state or provincial curricula structured around those standards? • To align future assessments to these standards, so that learners are held to the same level of performance, regardless of where they live? • To align the standards with GPF minimal proficiencies, where possible? <p>If no, and decision-makers do not consider this problematic, no action is necessary.</p>

QUESTIONS	POTENTIAL ACTION POINTS
<p>4. Assessments led by decentralized structures</p> <p>Do decentralized structures measure and report learner performance against a common set of standards? Are the assessment items of comparable levels of difficulty? (<i>Overlap with Curriculum component</i>)</p>	<p>See above for questions.</p>
<p>5. Classroom-based assessments</p> <p>Do teachers regularly measure and report learner performance on grade-specific standards? Do they provide learners who do not meet these standards targeted intervention to improve their performance?</p>	<p>If yes, no action is needed.</p> <p>If no, and decision-makers consider this problematic:</p> <ul style="list-style-type: none"> • Is the problem one of lack of knowledge of the standards or critical curriculum learning outcomes and their importance in monitoring learner progress, and if so, what actions can be taken to address this? • Is the problem the lack of simple tools to measure performance, or misuse of these tools, and if so, what actions can be taken to address this? • Is the problem a lack of time to carry out the assessments, and if so, what actions can be taken to address this? • Is the problem a lack of follow-up interventions to support learners who do not meet the standards and if so, what actions can be taken to address this?
<p>6. Policy-level assessment practices</p> <p>Are there national targets for the percentage of learners at key grade levels meeting or exceeding minimum curriculum expectations in reading and mathematics?</p>	<p>If yes,</p> <ul style="list-style-type: none"> • Is there a clear, objective, and measurable definition of the knowledge and skills learners who meet or exceed minimum curriculum expectations demonstrate? • Does the definition align with the minimum proficiencies outlined in the GPF for the targeted grade levels? • Are the targets evidence-based? • Are they embedded in national policy documents like the ESP? • Are they known and used by stakeholders at all levels of the system to monitor and report performance, and direct assistance to struggling learners/schools? <p>If no, and decision-makers consider this to be problematic, what processes can be put in place to achieve the above?</p> <p>If no, and decision-makers do not consider this to be problematic, no action is necessary.</p>

BIBLIOGRAPHY

- Allington, R. 2002. "[What I've Learned about Effective Reading Instruction from a Decade of Studying Exemplary Elementary Classroom Teachers.](#)" *Phi Delta Kappan* 83(10), 740–747. Accessed April 20, 2022.
- Allington, R. & Johnston, P. H. 2001. "What Do We Know About Effective Fourth-Grade Teachers and Their Classrooms?" In *Learning to Teach Reading: Setting the Research Agenda*, edited by C. Roller, 150–165. Newark, Del: International Reading Association.
- Ball, D. L. 1991. "Research on Teaching Mathematics: Making subject matter knowledge part of the equation." In *Advances in Research on Teaching*, Volume 2, edited by J. Brophy, 2, 1–47. Greenwich, CT: JAL.
- Bühmann, D. & Trudell, B. 2007. "[Mother Tongue Matters: Local Language as a Key to Effective Learning.](#)" Paris: UNESCO. Accessed April 20, 2022.
- Cilliers, J. & Taylor, S. 2017. "[Monitoring Teachers and Changing Teaching Practices: Evidence from a Field Experiment.](#)" Accessed April 20, 2022.
- Claessens, A., & Engel, M. 2013. "How Important Is Where You Start? Early Mathematics Knowledge and Later School Success." *Teachers College Record* 115(6): 1–29.
- Darling-Hammond, L. 1999. "Teacher Quality and Student Achievement: A Review of State Policy Evidence." Seattle: Center for Teaching Policy, University of Washington.
- Darling-Hammond, L., Hyler, M. E., Gardner, M. 2017. *Effective Teacher Professional Development*. Palo Alto, CA: Learning Policy Institute.
- Dobbie, W. & Fryer Jr., R. G. 2013. « Getting Beneath the Veil of Effective Schools: Evidence from New York City." *American Economic Journal: Applied Economics* 5(4): 28–60.
- Duncan, G. J., Dowsett, C.J., Claessens, A. Magnuson, K., Huston, A. C., Klebanov, P. & Japel, C. 2007. "School Readiness and Later Achievement." *Developmental Psychology* 43(6):1428–1446.
- Duncan, G.J., & Magnuson, K. 2011. "The Nature and Impact of Early Achievement Skills, Attention Skills and Behavior Problems." In *Whither Opportunity: Rising Inequity, Schools, and Children's Life Chances*, edited by Greg J. Duncan and Richard J. Murnane, 47–69. New York: Russell Sage.
- Evans, D. & Popova, A. 2015. "[What Really Works to Improve Learning in Developing Countries? An Analysis of Divergent Findings in Systematic Reviews.](#)" World Bank Policy Research Working Paper 7203. Accessed April 20, 2022.
- Evans, N., Srikantiah, D., Pallangyo, A., Sugrue, M., & Sitabkhan, Y. 2019. "[Towards the Design and Implementation of Comprehensive Primary Grade Literacy and Numeracy Programs. A Working Paper by the Global Reading Network.](#)" Prepared by University Research Co., LLC. (URC) under the Reading within REACH initiative for USAID'S Building Evidence and Supporting Innovation to Improve Primary Grade Assistance for the Office of Education (E3/ED). Accessed April 20, 2022.

Fitchett, P. G., Heafner, T. L., & Lambert, R. 2014. "Examining Social Studies Marginalization: A Multilevel Analysis." *Educational Policy*: 1–29.

Gagne, R.M., 1967. Curriculum research and the promotion of learning. Perspectives of curriculum evaluation, 1, pp.19-38.

Graham, S., Hebert, M., & Harris, K. R. 2015. "Formative Assessment and Writing." *Elementary School Journal* 115: 523–547.

Grossman, P.L. 1990. *The Making of a Teacher: Teacher Knowledge and Teacher Education*. New York: Teachers College Press.

Gustafsson, M. 2019. "[How Fast Can Levels of Proficiency Improve? Examining Historical Trends to Information SDG 4.1.1 Scenarios.](#)" UNESCO Institute for Statistics Information Paper No. 62, December. Accessed April 20, 2022.

Hill, H. C., Rowan, B., & Ball, D. L. 2005. "Effects of Teachers' Mathematical Knowledge for Teaching on Student Achievement." *American Educational Research Journal* 42(2): 371–406.

Joyce, B., & Showers, B. 1982. "The Coaching of Teaching." *Educational Leadership* 40: 4–10.

Juel, C. 1988. "Learning to read and write: A longitudinal study of 54 children from first to fourth grade." *Journal of Educational Psychology* 80(4): 437–447.

Kim, Y.-S. G., Boyle, H. N., Zuilkowski, S. S., & Nakamura, P. 2016. "Landscape Report on Early Grade Literacy." Washington, D.C.: USAID.

Knight, J., 2004. Progress through partnership. *The Learning Professional*, 25(2), p.32.

Kohler, F.W., Crilley, K.M., Shearer, D.D. and Good, G., 1997. Effects of peer coaching on teacher and student outcomes. *The Journal of Educational Research*, 90(4), pp.240-250.

Krammer, H. P. M. 1985. "The textbook as classroom context variable." *Teaching and Teacher Education*, 1(4): 273–278.

Leithwood, K., Louis, K.S., Anderson, S. & Wahlstrom, K. 2004. "Review of research: How leadership influences student learning." Wallace Foundation.

McBrien, J.L. and Brandt, R.S., 1997. *The Language of Learning: A Guide to Education Terms*.

Mishra, P., & Koehler, M. J. 2006. "Technological Pedagogical Content Knowledge: A new framework for teacher knowledge." *Teachers College Record* 108(6): 1017–1054.

Neufeld, B. and Roper, D., 2003. *Expanding the Work: Year II of Collaborative Coaching and Learning in the Effective Practice Schools*.

OECD 2010. *The High Cost of Low Educational Performance: The Long-run Economic Impact of Improving PISA Outcomes*. Paris: OECD Publishing.

ONE Campaign. 2021. [Rewriting the Future for 70 Million Children](#). Accessed April 20, 2022.

- Popova, A., Evans, D., Breeding, M. & Arancibia, V. 2018. "Teacher Professional Development around the World: The Gap between Evidence and Practice." World Bank: Policy Research Working Paper 8572.
- Popham, W. James, and Eva L Baker. Systematic Instruction. Englewood Cliffs (N.J.): Prentice-Hall, 1970.
- Pressley, M., Wharton-McDonald, R., Allington, R., Collins-Block, C., Morrow, L., Tracey, D., Baker, K., Brooks, G., Cronin, J., Neilsen, E., & Woo, D. 2001. "A study of effective first grade literacy instruction." *Scientific Studies in Reading* 5:, 35–58.
- Sadler, P.M., Sonnert, G., Coyle, H.P., Cook-Smith, N. and Miller, J.L., 2013. The influence of teachers' knowledge on student learning in middle school physical science classrooms. *American Educational Research Journal*, 50(5), pp.1020-1049.
- Sanchez, C. E., Atkinson, K. M., Koenka, A. C., Moshontz, H., and Cooper, H. 2017. "Self-grading and peer-grading for formative and summative assessments in 3rd through 12th grade classrooms: a meta-analysis." *Journal of Educational Psychology* 109: 1049–1066.
- Schmidt, W. H., McKnight, C. C., Houang, R. T., Wang, H., Wiley, D. E., & Cogan, L. S. 2001. *Why Schools Matter: A Cross-national Comparison of Curriculum and Learning*. San Francisco, CA: Jossey-Bass.
- Schoenfeld, A. H. 1998. "Toward a Theory of Teaching-in-Context." *Issues in Education* 41(1): 1–94.
- Schoenfeld, A. H. 2002. "How Can We Examine the Connections Between Teachers' World Views and Their Educational Practices?" *Issues in Education* 8(2): 217–227.
- Showers, B. and Joyce, B., 1996. The evolution of peer coaching. *Educational leadership*, 53, pp.12-16.
- Timperley, H., Wilson, A., Barrar, H. & Fung, I. 2007. "[Teacher Professional Learning and Development: Best evidence synthesis iteration.](#)" Wellington, New Zealand: Ministry of Education. Accessed April 20, 2022.
- Törnroos, J. 2005. "Mathematics Textbooks, Opportunity to Learn and Student Achievement." *Studies in Educational Evaluation* 31(4): 315–327.
- Tyler, R.W. 1957. The Curriculum Then and Now. In: Proceedings of the 1956 Invitational Conference on Testing Problems, Educational Testing Service, Princeton, 79.
- UNESCO. 2016. "Global Education Monitoring Report 2016: Education for people and planet." Paris: UNESCO.
- Valverde, G., Bianchi, L. J., Wolfe, R., Schmidt, W. H., & Houang, R. T. 2002. *According to the Book: Using TIMSS to Investigate the Translation of Policy into Practice through the World of Textbooks*. Dordrecht: Kluwer Academic Publishers.
- Watts, T. W., Duncan, G. J., Siegler, R. S., & Davis-Kean, P. E. 2014. "What's Past is Prologue: Relations Between Early Mathematics Knowledge and High School Achievement." *Educational Researcher* 43(7): 352–360.

Wharton-McDonald, R., Pressley, M., & Hampston, J. M. 1998. "Outstanding Literacy Instruction in First Grade: Teacher practices and student achievement." *Elementary School Journal* 99: 101–128.

Wilson, S. M. & Wineburg, S. S. 1988. "Peering at History Through Different Lenses: The role of disciplinary perspectives in teaching history." *Teachers College Record* 18(4): 525–539.

USAID. 2019. "[USAID Social and Emotional Learning and Soft Skills USAID Policy Brief.](#)" Accessed April 26, 2022.

USAID. 2019. "[USAID Reading Matters Conceptual Framework, Office of Education Brief.](#)" Accessed on April 20, 2022.

World Bank. 2022. "[The State of Global Learning Poverty: 2022 Update.](#)" Accessed November 17, 2022.

ANNEX I – GLOBAL PROFICIENCY FRAMEWORK OVERVIEW

Handouts which support familiarizing partners with the 2021 Global Proficiency Framework are attached.

The ***Introduction to the Global Proficiency Framework Module*** (an e-learning course), linked to USAID’s [GPF webpage](#), also provides a valuable introduction to those unfamiliar with the GPF and how to use it as a reference.

What is the Global Proficiency Framework?

The Global Proficiency Framework (GPF) describes the global minimum proficiency levels expected of students at grades one to nine in reading and mathematics. The four levels in the GPF—Below Partially Meets, Partially Meets, Meets, and Exceeds Global Minimum Proficiency—form a common scale from low to high achievement. These levels were identified, labeled, and defined in general terms by a group of 80 international stakeholders from education ministries, donor agencies, implementing partners, universities, assessment organizations, and research centers at a workshop in 2018.

The specific content for the levels, called the Global Proficiency Descriptors (GPDs or descriptors), was adapted from the International Bureau of Education (IBE-UNESCO) Global Content Framework by a group of 40 international reading and mathematics experts at workshops in 2019 and 2020.

As shown in the following diagram, the reading and mathematics experts wrote the descriptors for three of the levels. The *Below Partially Meets Global Minimum Proficiency* level was designated as lower than partially meets.



The following matrix provides an example of part of the GPF for grade three mathematics. It is organized hierarchically by domains, constructs, subconstructs, and knowledge or skills (also called content standards). Each knowledge or skill indicates “what” students should know and be able to do in the grade and subject. This is followed by descriptors at the three global minimum proficiency levels (also called performance standards). Each descriptor indicates “how much” of the knowledge or skill students should demonstrate for classification of their scores into the level.

Domain	Construct	Subconstruct	Knowledge or Skill (Content Standard)	Global Minimum Proficiency Level and Descriptor (Performance Standard)		
				Partially Meets	Meets	Exceeds
Number knowledge	Whole numbers	Identify, count, and identify the relative magnitude of whole numbers.	Count, read, and write whole numbers.	Count in whole numbers up to 100.	Count in whole numbers up to 1,000.	Count in whole numbers up to 10,000.
				Read and write whole numbers up to 100 in words and numerals.	Read and write whole numbers up to 1,000 in words and numerals.	Read and write whole numbers up to 10,000 in words and numerals.

1

For more see [Global Proficiency Framework: Reading and Mathematics | Education Links](#)

GLOBAL PROFICIENCY FRAMEWORK – LEARNING PROGRESSION EXAMPLE

MATHEMATICS

DOMAIN: S—STATISTICS AND PROBABILITY

Construct	Subconstruct	Knowledge or Skill	Grade												
			1	2	3	4	5	6	7	8	9				
S1 Data management	S1.1 Retrieve and interpret data presented in displays	S1.1.1 - Retrieve information from data displays (i.e., tally charts, bar graphs, or pictographs) with <u>single-unit scales</u> and up to four categories of data	x	x											
		S1.1.2 - Solve problems involving data displays (i.e., tally charts, bar graphs, or pictographs) with <u>single-unit scales</u> and up to four categories of data		x	x	x	x								
		S1.1.3 - Solve problems involving data displays (i.e., tally charts, bar graphs, or pictographs) with <u>multi-unit scales</u> and up to four categories of data				x	x								
		S1.1.4 - Construct data displays using categories of data and <u>single- or multi-unit scales</u>				x	x	x							
		S1.1.5 - Retrieve information from, or solve problems involving, data displays with <u>single- or multi-unit scales</u> and categories and sub-categories of data				x	x	x	x						
		S1.1.6 - Retrieve information from or construct <u>pie charts</u> and <u>Venn diagrams</u> (for <u>categorical data</u>) and <u>line graphs</u> and dot plots (for <u>bivariate data</u>) to represent data						x	x	x	x				
		S1.1.7 - Understand, describe, and use relationships within displays of <u>bivariate data</u>													
		S1.1.8 - Retrieve and interpret data represented in different ways, including in box plots, stem-and-leaf plots, and frequency tables of grouped data.												x	
	S1.2 Calculate and interpret central tendency	S1.2.1 - Solve problems involving <u>means</u> , <u>medians</u> , and <u>modes</u> , including the effect of <u>outliers</u> on means and medians								x	x	x			
		S1.2.2 - Compare key features of the distribution of two different but related sets of data, or the distribution of subcategories within a set of data								x	x	x			
		S1.2.3 - Identify desirable characteristics of sampling methods									x	x			
		S1.2.4 - Determine the median, quartiles, range, and interquartile range from a box plot or stem-and-leaf plot, and construct a box plot from a stem-and-leaf plot												x	
		S2.1 Describe the likelihood of events in different ways	S2.1.1 - Use words to describe the likelihood of an event happening or to compare the likelihood of two events happening					x	x	x					
			S2.1.2 - Calculate the probability of events happening, or place probability values or events on a continuum from 0 (impossible) to 1 (certain)						x	x	x				
S2.1.3 - Identify or calculate the probability of specific outcomes of simple or <u>compound events</u> , experimentally or otherwise									x	x	x				
S2.1.4 - Use a wide range of representations such as tree diagrams and two-way tables to explore possible outcomes of chance events and experiments involving multiple compound events (containing 2 or more simple events)													x		
S2.2 Identify <u>permutations</u> and <u>combinations</u>	S2.2.1 - Identify all the possible outcomes (sample space) for a situation involving a compound event comprised of two simple events, with and without replacement										x	x			
	S2.2.2 - Distinguish between situations involving permutations, where order of selection matters and situations involving combinations, where order of selection does not matter, and enumerate all possibilities systematically in contexts involving a limited number of outcomes												x		

For more, see [Global Proficiency Framework for Mathematics](http://edu-links.org) (edu-links.org)

GLOBAL PROFICIENCY FRAMEWORK – LEARNING PROGRESSION EXAMPLE

READING

DOMAIN: R—READING COMPREHENSION

Construct	Subconstruct	Knowledge or Skill	Grade										
			1	2	3	4	5	6	7	8	9		
R1 Retrieve information	R1.1 Recognize the meaning of <u>common grade-level words</u>	R1.1.1 - Recognize the meaning of <u>common grade-level words</u>	x	x	x	x	x	x	x	x	x	x	x
	R1.2 Retrieve explicit information in a grade-level text by direct- or close-word matching	R1.2.1 - Retrieve a single piece of <u>explicit information</u> from a <u>grade-level text</u> by <u>direct- or close-word matching</u>		x	x	x							
		R1.2.2 - Retrieve a single piece of <u>explicit information</u> from a <u>grade-level continuous text</u> by <u>direct- or close-word matching</u>					x	x	x	x	x		
		R1.2.3 - Retrieve a single piece of <u>explicit information</u> from a <u>grade-level non-continuous text</u> (tables, diagrams, graphs) by <u>direct- or close-word matching</u>					x	x	x	x	x		
	R1.3 Retrieve <u>explicit information</u> in a <u>grade-level text</u> by <u>synonymous matching</u>	R1.3.1 - Retrieve a single piece of <u>explicit information</u> from a <u>grade-level text</u> by <u>synonymous word matching</u>			x	x							
		R1.3.2 - Retrieve a single piece of <u>explicit information</u> from a <u>grade-level continuous text</u> by <u>synonymous word matching</u>					x	x	x	x	x		
		R1.3.3 - Retrieve a single piece of <u>explicit information</u> from a <u>grade-level non-continuous text</u> (e.g., <i>simple diagrams and tables</i>) by <u>synonymous word matching</u>					x	x	x	x	x		
	R2 Interpret information	R2.1 Identify the meaning of unknown words and expressions in a grade-level text	R2.1.1 - Identify the meaning of <u>unknown words</u> (including <u>familiar words used in unfamiliar ways</u>) and <u>idiomatic and figurative expressions</u> in a <u>grade-level text</u>			x	x	x	x	x	x	x	x
		R2.2 Make inferences in a grade-level text	R2.2.1 - Make simple <u>inferences</u> in a <u>grade-level text</u> by relating pieces of explicit and/or <u>implicit information</u> in the text			x	x						
R2.2.2 - Make <u>inferences</u> in a <u>grade-level continuous text</u> by relating pieces of explicit and/or <u>implicit information</u> in the text							x	x	x	x	x		
R2.2.3 - Make <u>inferences</u> in a <u>grade-level non-continuous text</u> (e.g., tables, diagrams, graphs) by relating pieces of explicit and/or <u>implicit information</u>							x	x	x	x	x		
R2.2.4 - Identify the sequence of events/actions/steps in a <u>grade-level text</u>						x	x	x	x	x	x		
R2.2.5 - Identify, compare, or contrast points of view in a <u>grade-level text</u>							x	x	x	x	x		
R2.2.6 - Identify, compare, or contrast evidence in a <u>grade-level text</u> to support or explain an idea, action, or statement								x	x	x	x		
R2.2.7 - Draw a basic <u>conclusion</u> from a <u>grade-level text</u> by synthesizing information in the text (grades 6 to 9)								x	x	x	x		
R2.2.8 - Apply information from a <u>grade-level text</u> to a new example or situation											x		
R2.3 Identify the main and secondary ideas in a <u>grade-level text</u>	R2.3.1 - Identify the <u>main idea</u> in a <u>grade-level text</u> when it is not explicitly stated			x	x	x	x	x	x	x	x		
	R2.3.2 - Distinguish between a <u>prominent main idea</u> and secondary ideas in a <u>grade-level text</u>					x	x	x	x	x			

For more, see [Global Proficiency Framework for Reading \(edu-links.org\)](http://edu-links.org)