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PAL Network Common Assessments

EVIDENCE TO IMPROVE FOUNDATIONAL LITERACY AND NUMERACY

Prepared by:

People's Action for Learning (PAL) Network

www.palnetwork.org | info@palnetwork.org

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PAL NETWORK
People's Action for Learning

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Over the years, PAL Network member organizations have created an innovative, powerful model to assess foundational learning in developing countries that is cost-effective, inclusive, and has the capacity to mobilize citizens to advocate for foundational learning. This model, now known as Citizen-led Assessments (CLAs), has grown organically from its inception and first innovation in India, expanded to vast geographies throughout the globe and has recently evolved into common assessments, where organizations from different countries work together to have tools that allow for analyzing learning comparatively and advocate at the global level. We believe these tools have the potential to reach a larger scale than what they had in the past to be able put light on the otherwise hidden and neglected issue of foundational learning.

The CLA model is defined by a few key characteristics.

1. They are conducted orally, one-on-one with each child to ensure that the skills of children than are still learning to read are captured.
2. They are conducted in households so that children that are not attending school (regularly or occasionally) are included in the assessment.
3. They measure foundational learning of reading and numeracy skills, mostly at the Grade 2 or Grade 3 level according to national curricula, typically on children between 5 and 16 years old.
4. They use tools that are quick and simple to administer and understand, which facilitates engagement from local communities and fosters interest by relevant stakeholders.

Additionally, CLAs are designed to involve the civil society in the process of data collection. PAL Network member organizations that lead the process of CLAs in each country create a network of CSOs that support the implementation of assessment, in many cases gathering volunteers from the local communities to conduct the assessments themselves, after a carefully designed training.

Due to these powerful and scale friendly features that resonate with many low and middle-income country contexts, the CLA model has spread organically to 14 countries[1] across the Global South. In addition, a review in 2019 found that CLA tools were used by 56 national and international organizations in 33 countries. From 2005, CLAs have reached more than 9 million children, involving more than 1 million volunteers in more than 40 languages.

The growth of these initiatives has been greatly supported by the UNESCO Institute of Statistics (UIS). CLAs have been recognized by the international education community as a valid and powerful way of measuring foundational learning, especially by the UIS with the inclusion of ASER and UWEZO tools in the Catalogue of Learning Assessments. PAL Network member organizations and Secretariat have been part of the efforts to strengthen data production on learning outcomes globally by participating regularly in the Global Alliance to Monitor Learning (GAML).

Discussions held in the context of GAML motivated the PAL Network to develop new and more sophisticated assessment instruments. One issue highlighted in these discussions was that the results of the different CLAs were very difficult to be compared, and this was an obstacle for advocacy at the global level. To answer to this problem, in the last few years, the PAL Network has been working on common assessment initiatives, which go beyond the traditional CLAs. While CLAs have been always mapped to national curricula, common assessment initiatives are mapped to global standards (SDG4.1.1a and, more recently, the Global Proficiency Framework).

[1] PAL Network member countries include India, Pakistan, Nepal, and Bangladesh in South Asia; Kenya, Uganda, Tanzania, Mozambique and Botswana in Eastern and Southern Africa; Nigeria, Mali and Senegal in West Africa; and Mexico and Nicaragua in the Americas.

In 2019, the PAL Network designed and implemented ICAN (International Common Assessment of Numeracy)[2] in 13 countries. While the assessment expanded the range of numeracy contents, it kept the all the aforementioned characteristics of CLAs. After its implementation, the tool was highlighted and showcased at the UNESCO Institute of Statistics Learning Assessment Dashboards along with other prestigious international learning assessment programs such as PISA, TIMMS, and PIRLS, among others.

Building on ICAN's success, PAL Network is currently developing ELANA[3] (Early Language & Literacy and Numeracy Assessment), the new common assessment initiative. This initiative is comprised by two components: a numeracy assessment that builds on ICAN, expanding the number of items that form the item bank; and a literacy component that evaluates skills in the subdomains of oral language, decoding and reading comprehension. The assessment targets children between 4 and 10 years old to understand the continuum of learning between preschool and the first years of primary school and will provide estimations of achievement of SDG 4.1.1.(a) and the academic learning component of SDG4.2. In its final form, ELANA will be implemented using a digital application and will be adaptive. This assessment is being developed by the PAL Network with the technical support of the Australian Center for Educational Research (ACER).

This journey has proved that the PAL Network has the capacity to create tools that are both rigorous to assess foundational learning, but also create a platform for advocacy at the local, national, and global levels. Additionally, the history of CLAs shows that in many countries it is possible to conduct these assessments at a large, national scale. We believe that the next phase for CLAs is to take our common assessment initiatives to a nationally representative scale that would put the discussion of foundational learning in the next level. We believe this initiative has the potential to become as influential as other assessment programs that target older children have been in the last decades.

PAL Network's common assessment initiatives have developed tools that can be part of a movement to report and discuss foundational learning levels globally. We believe this is crucial in this historic moment: it has been 7 years since the release of the Sustainable Development Goals and we are only 8 years from 2030, a date in which many countries have committed to achieve the goals that after the pandemic seem even more difficult to reach. PAL Network is committed to produce reliable data, up-to-date and at scale, to inform actions to improve foundational literacy and numeracy.

We are proposing to conduct a common assessment in 15 countries with a sample design built to provide nationally representative estimations of foundational learning for children between 5 and 16 years old. The assessment results will be used mainly for advocacy purposes at the national, regional, and global levels. At the global and regional levels, we will show how each of the participating countries performs in terms of equipping their youth with foundational numeracy and literacy skills, fostering discussions about the achievement of global goals after the pandemic.

For the numeracy component, the assessment will be based on ICAN. Foundational numeracy includes domains such as number knowledge, measurement, geometry, and simple data display. Half of the ICAN assessment tool covers number domain and rest of the half is divided between geometry, measurement, and data display. The tasks included in ICAN are the following:

1. Number knowledge (or as GPF defines it as Number and operations)
    a. Whole numbers

[2] For more information, see https://palnetwork.org/wp-content/uploads/2020/07/2020_PAL-Network_ICAN-Report_EN.pdf

[3] For more information, see https://palnetwork.org/wp-content/uploads/2022/04/EN_ELANA_basic-info_03-02-2022.pdf

i. Identify, count in, and identify the relative magnitude of whole numbers (Counting whole numbers; identifying number symbols; identifying the relative magnitude of whole numbers; sequencing, ordering and grouping numbers; representing whole numbers in equivalent ways)
ii. Solve operations using whole numbers (Solving operations of addition, subtraction, multiplication and division using non-symbolic and symbolic number)
iii. Solve real-world problems involving whole numbers (Solving real-world problems involving subtraction and division)

2. Measurement
    a. Length, weight, capacity, volume, area, and perimeter
        i. Use non-standard and standard units to measure, compare, and order (Comparing objects by length, weight (mass), and volume; use non-standardised and standardised units to measure and compare the length, weight, and volume of objects)
    b. Time
        i. Tell time (Telling time, solving problems involving time and calendar)
3. Geometry
    a. Properties of shapes and figures
        i. Recognize and describe shapes and figures
    b. Spatial visualizations
    c. Position and direction
        i. Describe the position and direction of objects in space (Mentally transforming, composing, and decomposing shapes and figures)
4. Statistics and probability
    a. Data Management
        i. Retrieve and interpret data presented in displays
        ii. Classification: Sorting and grouping objects based on their similarities on one or more dimensions
5. Algebra
    a. ICAN, though holistic, misses out on items for algebra, both for pattern recognition – which is described in the GPF as "Recognize, describe, extend, and generate patterns" – and relational and functions "Demonstrate an understanding of equivalency". We are planning to expand ICAN to include pattern recognition items to our assessment, borrowing from our current ELANA initiative.

For reading, the tool that we are proposing is a paper-format version of our ELANA. It will cover the 3 domains of the GPA for foundational learning: Comprehension of oral or signed language, decoding, and reading comprehension.

1. Comprehension of oral or signed language

For the Comprehension of oral/signed language domain, we will use a grade-appropriate passage that is read aloud to children and a series of 4 information retrieval and 1 inferential questions.

2. Decoding

There are three tasks that we believe must be included in the assessment: a letter recognition task, a word-decoding task in which children read aloud grade-level isolated words, and a fluency task to understand how children read an appropriate-grade level text. These are simple-to-administer tasks that have been widely implemented across CLA assessment programs.

As decoding skills are variable from language to language, the items in this domain will be language-specific. However, it is important that we have similar criteria for choosing the letters or words that are used, which should strive to be similar in terms of complexity and taught in a similar moment of the school year.

3. Reading comprehension

Reading comprehension tasks are based on a text that acts as a stimulus, followed by a series of questions. For Grade 2, texts are short (30-40 words), simple narrative passages. Questions (from 3 to 5 in general) mostly refer to aspects that can be directly extracted from the text, but in general they include one question that require children to do an additional step to interpret the feelings of characters or the reason for those feelings – inference.

This assessment will have two reading comprehension sets that include a passage and 3-4 information retrieval questions and 1-2 inference making questions. Reading comprehension is a domain that has been proven to be considerably stable across different contexts and languages – compared to the decoding domain. For this reason, the passage will be common across the different languages in which the assessment will be implemented. The passages will be taken from the curated and already piloted list of stories developed in ELANA.

The sampling strategy will consist of a two-stage probability sampling, in which Enumeration Areas (EAs) will be randomly drawn from national census' sampling frames, and households will be randomly drawn from selected EAs. Considering representativeness at the national level, our preliminary minimum sample size calculations state that we will achieve estimates with standard reliability and precision with 200 EAs and 10 households per EAs – a total of 2,000 households per country. This sampling design will achieve reasonable estimates at the national level. If we wanted to have representativity at smaller levels (regions or states), which may be more useful for advocacy within each country, we would need to increase the sample size – the final result would depend on the desired precision of the estimates at the region or state level and the number of domains for which representativeness is desired.

We believe this effort will bring us closer to the goal of being able to measure progress toward SDG4.1.1. (a) in developing countries, bringing light to a problem that is often neglected. PAL Network's data (among others) have highlighted the issue of low achievement of foundational learning even in contexts where children attend classes and progress in the schooling system. Being able to bring this problem to the front in countries where nationally representative data is outdated or does not exist will be a substantial contribution to assure that the right to education is achieved for all children.