

Exploring How EiEPC Data and Evidence Support Teaching and Learning in Practice:
Implementing the Holistic Assessment for Learning in Syria

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EXPLORING HOW EIEPC DATA AND EVIDENCE SUPPORT TEACHING AND LEARNING IN PRACTICE: IMPLEMENTING THE HOLISTIC ASSESSMENT FOR LEARNING IN SYRIA

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ABSTRACT

In this field note, we describe how data and evidence can support teaching and learning in practice in Syria, drawing from one approach that used the Holistic Assessment for Learning (HAL), a formative assessment designed in 2018 to measure literacy, numeracy, and social-emotional learning among grade 2 and 3 students in formal education. In 2023, HAL was piloted, revised, and then rolled out across nonformal and formal education settings in northwestern and northeastern Syria by Save the Children International and Arfada for Development. Using training reports, field work data from the tool, teacher surveys, and debriefing tools, we explore in this field note how tools like HAL can inform future formative assessment data. We describe how classroom-level, curriculum-aligned measures can generate immediately actionable insights for teachers while remaining adaptable for aggregation into broader data systems. Teachers in Syria used HAL results on literacy, numeracy, and social-emotional learning to identify learning gaps and adjust lesson plans and remediation strategies in real time. We also situate the useability and lessons learned about formative assessments within the broader education in emergencies evidence ecosystem, highlighting implications for equity, standardization, and the localization of data systems during crises.

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INTRODUCTION

When education has been disrupted, the programming designed to reach children experiencing crises varies, summative assessments may not occur, and teachers are not always sure of their students' skills, needs, and challenges. Using formative assessments during a crisis can ensure that teachers remain responsive to their learners' needs. Despite the need for valid and reliable data to inform practice and policy during crises (UNESCO 2016), education in emergencies and protracted crises (EiEPC) data ecosystems tend to prioritize national, top-down data collection designed to populate education management information systems (EMIS), rather than formative systems that support classroom practice, teachers, and learning. Evidence gaps persist in how national EMIS data translates into improved teaching and learning. In this field note, we examine how the EiEPC data and evidence ecosystem within and outside EMIS can support teaching and learning. We draw from project documentation, teacher feedback, and published literature to explore the expansion and implementation of the Holistic Assessment for Learning (HAL). We examine the feasibility of data-informed teaching practices and how formative data can be used in the EiEPC evidence ecosystem. HAL is a formative assessment tool developed in Syria in 2018-2019 (Khamis-Dakwar et al. 2022; Tubbs Dolan 2019) through a collaboration between UNICEF, Save the Children, New York University Global TIES for Children, Education Cannot Wait (ECW), and regional experts. HAL was developed to support the use of classroom data as a scalable tool to improve instruction in EiEPC.

We first situate formative assessments within the broader EiEPC evidence ecosystem and then specifically in Syria and outline the persistent gaps between policy and practice. We then present the HAL approach that was implemented in 2023, drawing from project documentation, teacher feedback, and published literature (Khamis-Dakwar et al. 2022; Tubbs Dolan 2019) to generate lessons learned through a local adaptation and implementation. Next, we critically reflect on what HAL reveals about the practicality of data-informed teaching during crises and the challenges and opportunities of embedding such practices in data systems. Finally, we discuss how to strengthen EiEPC data ecosystems, offering recommendations for how to leverage formative assessments to create more equitable, learning-centered, and sustainable approaches to measuring and supporting EiEPC.

SITUATING FORMATIVE ASSESSMENTS IN EIEPC

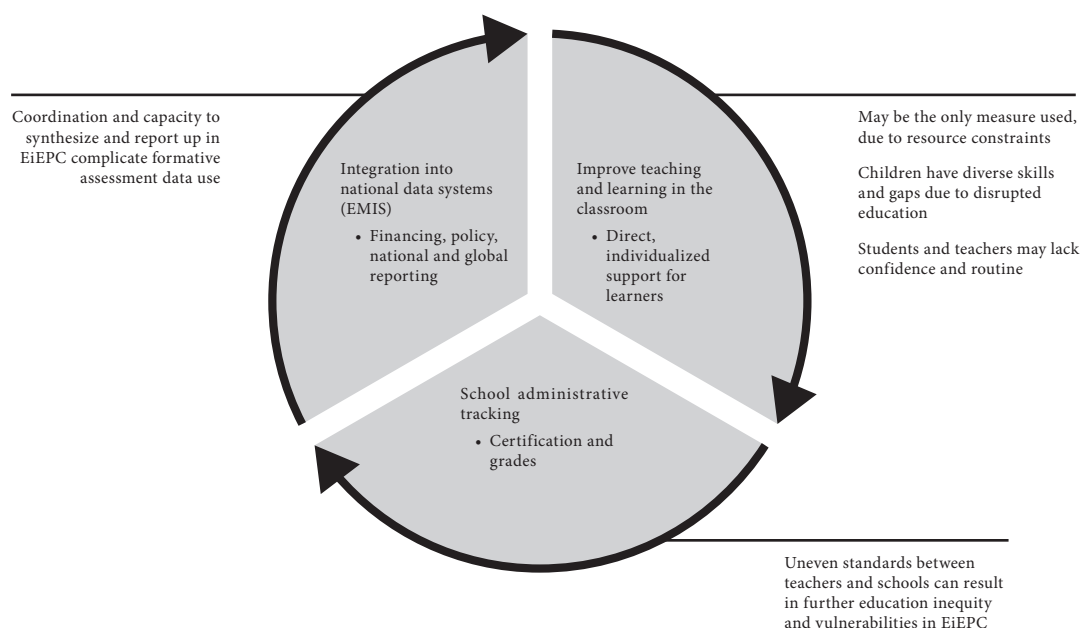
Formative assessments include teacher-led activities that measure students' learning progress to inform teaching and learning activities (Browne 2016). Used in daily classroom practice, formative assessments often are designed in situ. They may include quizzes, oral questions, or short written tasks. Education data ecosystems typically focus on summative, end-of-year exams rather than on ongoing classroom assessments to generate annual snapshots of learning outcomes, whereas formative data offers rich trends to help understand learning throughout a program or academic year (Clarke 2012). National education systems integrate formative assessments into data ecosystems through legislation, curriculum guidelines, rubrics and replicable measures, and teacher professional development (OECD 2005). Some evidence links formative assessment to better student outcomes, particularly when the data generated is immediately actionable (Nitko 1993; OECD 2005). However, evidence on their impact has not been frequently measured (Browne 2016).

USING FORMATIVE ASSESSMENTS IN DATA ECOSYSTEMS IN EIEPC

Formative assessments used in EiEPC enable educators to identify gaps and adapt their teaching strategies to support learners who face disrupted schooling. This is particularly important when national assessment systems and summative assessments are unavailable or cancelled, due to resource constraints during crises (Bawane and Sharma 2020). Specifically, formative assessments enable teachers to identify the varied learning levels of children whose education has been disrupted. This makes it possible to tailor remedial and accelerated programs for the local environment, which helps to reduce stress and build confidence for both learners and teachers (Ali 2022; Liberman, Levin, and Luna-Bazaldua 2020).

We outline the role of formative assessment data used in EiEPC data ecosystems in Figure 1. This framing outlines the challenges related to integrating formative assessments in national curricula and data ecosystems to improve pedagogy and support administration during crises.

Figure 1: Formative Assessment Data Use in the EiEPC Data Ecosystem



The formative assessment data used in EiEPC is complex and often fragmented. It is used by teachers, students, principles, ministries of education, humanitarian and development actors, and communities to generate, share, and utilize classroom-level data to inform teaching and learning (Kalista 2023). In the classroom, teachers and students engage in day-to-day assessments that immediately inform instruction. At the system level, ministries of education oversee institutional information systems, such as EMIS, to capture classroom assessment data for evidence-informed planning. Humanitarian and development actors, including United Nations agencies, nongovernmental organizations, and donors, also design and implement assessments to monitor program indicator achievement and track progress against goals. These can be used for formative assessment purposes or as program monitoring tools (Kalista 2023). However, the effectiveness of this ecosystem depends on three drivers identified by the World Bank’s SABER framework: an enabling context, system alignment, and assessment quality (World Bank 2013).¹

In a seminal review of formative assessments in crisis contexts, Bawane and Sharma (2020) highlight several examples of how formative assessments have been used. Across examples in Bangladesh, Nepal, and the Philippines, teachers used oral questioning and observation, peer assessment and group activities, and home-based assignments to maintain continuity and track children’s progress during crises (Bawane and Sharma 2020). Finally, across multiple countries during the COVID-19 pandemic, radio and TV lessons offered short quizzes via mobile messaging and online platforms, which enabled teachers to collect student responses and provide feedback (see, e.g., Corcoran, Pinnock, and Twigg 2022; Elliot et al. 2022).

¹ The SABER framework is a systems-level framework for assessing and strengthening national education policies. The focus on data ecosystems is only one part of the framework, which primarily considers how effective the whole system is. Data systems can inform and be informed by the framework.

The literature frames formative assessment in EiEPC in relation to how teachers can measure and track learning and what is being measured. Children affected by emergencies frequently experience stress, health barriers, trauma, and anxiety that interfere with concentration and academic progress. Assessments that capture social-emotional learning (SEL) alongside academic outcomes are therefore crucial for addressing these interrelated domains (Aber et al. 2017; Kim et al. 2020; Krupar and D'Sa 2024; Tubbs Dolan et al. 2022).

The enabling environment is also crucial to establish formative data as part of a functional data ecosystem. For example, in one literature review of formative assessment in sub-Saharan Africa, Browne (2016) found that most studies emphasize the need for stronger teacher training and capacity-building, particularly through practical, in-service programs that provide concrete examples and tools to build local expertise. However, large class sizes, resource constraints, and entrenched school cultures can limit what teachers can implement in EiEPC. Infrastructure constraints, such as poor connectivity, necessitate paper-based adaptations, and formative data is often siloed from national EMIS or donor reporting systems, limiting its systemic impact (Jonathan et al. 2025). Nonetheless, an emerging consensus in the literature suggests that formative assessments embody the principles of localization, equity, and feasibility while generating evidence that can inform both teacher practice and system accountability (Al-Samarai 2021).

FORMATIVE ASSESSMENT IN SYRIA

Education in Syria highlights both the potential and the challenges of formative assessment in EiEPC. Before the civil war, Syria had begun institutionalizing classroom assessment through its 2009 curriculum and through the Center for Education Measurement and Assessment (World Bank 2013). The School Integrated Management Information System (SIMIS) was designed to capture information on schools, students, teachers, infrastructure, and classroom assessment (Al-Samarai 2021). However, in practice, assessments were often weak, focused on recall, and used more for administration than for improving pedagogy, with issues such as grade inflation, uneven standards, and limited feedback undermining effectiveness (World Bank 2013). Conflict further disrupted SIMIS, making reliable data collection extremely difficult, fragmented, and disjointed across education stakeholders (Qaddour and Husain 2022).

Outside of the national system, Hatahet et al. (2024) investigated the relationship between attendance, classroom behavior, and formative assessments in IDP settings and reinforced that formative data was a strong predictor of learning outcomes and early class-based course correction (School-to-School International 2022). Currently, implementing partners and local officials use diverse learning assessment tools, with an emphasis on summative data, with little comparability across schools (Qaddour and Husain 2022). Systemic weaknesses, combined with broader challenges common in emergencies, such as displacement, multiple curricula, and linguistic diversity, underscore the need for formative tools that are both rigorous and feasible in crisis-affected settings.

BACKGROUND TO HAL

In response to the need for systematic formative data in Syria specifically and EiEPC more broadly, HAL was developed to be contextually relevant and curriculum-specific and to provide quantitative tracking and learning logs for teachers to use with children in their classrooms (Tubbs Dolan 2019). It was designed to improve education by informing classroom practice, offering teachers immediate feedback on the skills students have mastered and those requiring further support. Designed for grade 2 and 3 students in both formal and nonformal education (NFE), the HAL toolkit includes administration guidance for teachers to use orally with individual students, measuring literacy, numeracy, and social-emotional learning and linking observations to a teacher guide with activities to link data to classroom practices (NYU Global TIES for Children 2021).

In 2019, a pilot of HAL with more than 1,400 children emphasized the tools' useability and highlighted a strengths-based approach that considered students' prior knowledge (Tubbs Dolan 2019). During the 2019 pilot, teachers administered HAL two to three times per year, supported by training and peer learning circles. By combining rigorous psychometric development with practical, teacher-centered resources, Tubbs Dolan developed a case study for how formative assessment can be locally adapted as well as aggregable to national ecosystems.

APPROACH: GENERATING DATA ABOUT NFE IN SYRIA

Since the development of HAL in 2019, it has been rolled out to NFE settings and reviewed with additional experts, ministry officials, and Syrian researchers. This section focuses on the data generated in NFE in 2023 following three phases of implementation: a pilot phase to test HAL's reliability and usability with teachers, a training and rollout phase to prepare teachers to administer and use the tool, and a monitoring and follow-up phase to document teacher use of data and refine the tool based on feedback. HAL was implemented in NFE in 2023 through partnerships involving Save the Children, Arfada, UNICEF, and ECW. Training of the core team was delivered remotely in English, while the teacher training was delivered in Arabic and materials were translated into Arabic and validated by the trainees to ensure accessibility and contextual relevancy.

The first phase focused on piloting the HAL tool in NFE with host community or internally displaced children in grades 2 and 3 across northwest Syria and northeast Syria. Arfada staff reviewed and finalized the tool, trained teachers as enumerators on its use and child safeguarding, and conducted field visits to 61 schools in five governorates. Data collection involved individual interviews using KoboToolbox electronic forms, with ethical standards ensuring voluntary and informed participation. The sample included 604 students (304 in grade 2 and 300 in grade 3), with a gender split of 52.8

percent male and 47.2 percent female (see Table 1). This sample was not designed to be representative of all NFE students but was large enough to validate the tool within NFE.

The second phase tested the usability of the paper-based HAL tool through remote training sessions for teachers in NFE. Twenty teachers (10 from NWS and 10 from NES) representing six partner organizations participated in an interactive training in Arabic over three consecutive days (see Table 1). Training aimed at preparing teachers to pilot the tool with five students each and provide feedback on usability.

The third phase scaled up the implementation of HAL through extensive teacher training with teachers in NFE and formal settings in northwest Syria. Remote sessions trained 283 teachers in NFE and 506 teachers in formal settings, covering grades 2 and 3 (see Table 1). The sample was a census based on the population of teachers in schools supported by Save the Children staff. Training focused on administering assessments, analyzing data, and adapting instruction to address learning gaps. Follow-up support included 50 field visits and 50 phone interviews to monitor implementation and provide technical assistance. Teachers used the tool in their classrooms, but this data was not entered into KoboToolbox, since it was for teachers to use in the classroom.

Table 1: Data Collected in HAL Rollout

Phase	Children Assessed				Teachers Trained	
	Grade 2		Grade 3		Grades 2 and 3	
	Boys	Girls	Boys	Girls	Male	Female
1	155	149	164	136	None	None
2	26	24	31	19	10	8
3	Not collected	Not collected	Not collected	Not collected	168	115

The approach emphasized using teacher's feedback to understand how HAL was used within classrooms. Teachers and enumerators provided structured feedback during piloting, which informed revisions to test items, administration procedures, and guidance materials. Existing teacher learning circles, where teachers in each school met and discussed HAL and other topics, reinforced training and provide peer support.

REFLECTION

This section reflects on how HAL was adapted for NFE and implemented in formal education, and how classroom data supported teaching and learning with recommendations for the EiEPC data ecosystem. Drawing on results from the Phase 2 Teacher Training Report and the Phase 3 Roll-out Report, formal and NFE teachers had different experiences using HAL. In formal settings, primarily in northwest Syria, teachers entered training with a strong familiarity with curriculum pacing, assessment routines, and grade-level expectations. They tended to use HAL as a diagnostic supplement to refine instruction within an already structured system, reporting high confidence gains after training (99.6%), but also emphasizing time pressures and the challenge of integrating HAL into dense schedules. By contrast, NFE teachers, working across northwest and northeast Syria in accelerated, catch-up, and remedial settings, demonstrated equally strong posttraining confidence gains (100%) but relied more heavily on training and follow-up support to build foundational assessment literacy. They used HAL not only to identify learning gaps but to make sense of extreme heterogeneity in age, prior schooling, and learning levels within the same classes. Monitoring visits and interviews showed that NFE teachers more frequently highlighted the need for quiet, dedicated assessment space and motivational strategies to sustain learner engagement, whereas formal teachers focused on alignment with curriculum and workload management, underscoring that HAL functioned as an instructional enhancement tool in formal systems but as a capacity-building and coherence mechanism in NFE contexts.

ADAPTATION FOR NFE

Adapting HAL was a deliberate and multilayered process to ensure its relevance to curricula and usability in crisis-affected Syria. Teachers highlighted how HAL was linguistically and culturally adapted, translated into Arabic, and aligned with local curricula to make it practical for classroom use. Ethical safeguards ensured voluntary, inclusive participation, while operational adjustments addressed infrastructure constraints, such as introducing paper-based versions where tablets were unavailable. HAL was also shortened with teachers to reduce fatigue. Specifically, teachers noted that some literacy items were too easy late in the school year, recommending earlier administration or closer curricular alignment. Teachers also reported using motivational strategies to support learners to continue. These lessons learned suggest that local adaptation is essential for making formative assessments feasible, pedagogically useful, and relevant for all children in humanitarian contexts regardless of their education background.

TEACHERS' USE OF HAL DATA

Teachers reported that HAL data was useful for instructional planning. They reported using assessment data to identify learning levels and skills, differentiate instruction, and plan future lessons. After training, HAL was described as clear, varied, and beneficial for diverse age groups, and teachers emphasized that it strengthened their confidence in using structured formative assessments. Many NFE teachers trained to use HAL had not previously used structured formative assessments. Teachers' reflections, which described HAL as "a wonderful work that helps in knowing the level of the student in all respects," illustrate how capacity building can foster teacher confidence to use data in the classroom even in resource constrained, nonformal settings. Importantly, teachers were encouraged to use data actively rather than to passively collect data, which enabled them to adapt their teaching practices based on HAL data.

DATA QUALITY AND ADMINISTRATION CHALLENGES

Several systems challenges emerged across all phases of HAL implementation. Difficulties obtaining approval from education authorities and camp administrations restricted access to some schools.² Logistical barriers such as rough roads, lack of private rooms for assessment, and insecurity compounded these issues resulting in paper-based data collection in classrooms that could not be systematically reviewed. Teachers sometimes prompted students during tasks with a well-intentioned attempt to help children understand the correct answer, resulting in positive response biases. Some items caused confusion, highlighting the need for item revisions and stronger training protocols. Teachers also noted equity concerns, including challenges for children with speech difficulties or from displacement camps. Most importantly, when looking at formative assessment in policy, data from HAL remains siloed from national EMIS and other reporting systems, limiting systemic impact. Despite these obstacles, teachers overwhelmingly described HAL as comprehensive and valuable, with many recommending expanding the approach to additional grades.

THE DATA ECOSYSTEM

The adaptation of HAL for NFE demonstrates how tools must be linguistically, culturally, and pedagogically contextualized to be effective. Together, these lessons learned suggest that, if formative assessments are embedded in EiEPC data systems, they strengthen teacher practice and have the potential to bridge the gap between classroom data collection and improved learning outcomes in crisis-affected settings.

² Specifically, we could not visit the Mahmoudli camp or the Tawahinah camp because neither camp administration approved data collection.

The experiences from the HAL rollout in Syria underscore the potential of formative assessment as a cornerstone of the EiEPC data ecosystem. In settings where national EMIS are weak or absent and where children's learning trajectories are highly fragmented due to displacement, HAL provided a structured yet flexible mechanism for generating actionable data. Teachers in NFE centers used HAL not only to identify literacy, numeracy, and social-emotional learning gaps but also to adapt instruction, plan remediation, and advocate for resources, which reflects Clarke's (2012) argument that formative assessment is most powerful when it produces immediate, actionable insights in the classroom.

At the same time, the lessons learned echo broader challenges in NFE contexts. Teachers reported that the tool was lengthy, sometimes leading to fatigue, and that logistical constraints such as lack of private rooms hindered administration. Teachers' tendency to lead students to the correct answers or to teach them during the assessment highlights the need for more detailed training about the purposes of formative assessments and highlights the tension between maintaining psychometric integrity and ensuring useability in humanitarian settings. These issues mirror Al-Samarai's (2021) observation that EiEPC contexts often lack the infrastructure and time required for rigorous assessment.

CONCLUSION

In this field note, we reframe the question of how EiEPC data ecosystems support teaching and learning by examining how formative assessment data is generated and used at the classroom level, and what this reveals about the relationship between instruction and broader data systems. Drawing on the implementation of HAL in Syria, this analysis highlights how formative assessment can produce locally actionable information that supports instructional decisionmaking, while also pointing to the conditions under which such data might inform system-level reflection. In this program, HAL functioned as a classroom-based assessment approach, with data used by teachers to identify learning levels and adapt instruction, rather than as a mechanism for routine upward reporting to ministries, donors, or nongovernmental organizations.

The findings suggest that classroom-level formative data has the potential to contribute to programming and policy discussions, especially when aggregated and disaggregated by key dimensions such as gender, age, grade, and displacement status. However, this potential was not fully realized within the scope of the NFE implementation discussed here. Future efforts to link formative assessment data to EiEPC data ecosystems would require deliberate system design, including clarity on data flows, roles, and purposes, to avoid extractive practices and ensure that data continues to serve teaching and learning first.

Across the implementation, iterative piloting, teacher feedback, and ongoing support shaped how HAL was used and adapted in practice, underscoring the importance of professional learning structures such as existing teacher learning circles to strengthen data use. Our experiences adapting, contextualizing, and supporting teachers to implement HAL documented here point to the interaction between tool design, teacher training, contextual adaptation, and instructional routines. Strengthening EiEPC data ecosystems will therefore depend not only on the availability of psychometrically sound tools, but also on investments in teacher capacity, feedback loops, and system alignment that connect instructional decisions with systems accountability in ways that remain feasible and contextually appropriate.

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