



Knowledge Piece on TEP Centre's Learning Programmes:

Highlighting the
Assessment Informed
Instruction

Prepared For:
Bill and Melinda Gates
Foundation



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List of Abbreviations

A-I-I	- Assessment Informed Instruction
CAMaL	- Combined Activities for Maximised Learning
COVID-19	- Coronavirus Disease 2019
FLN	- Foundational Literacy and Numeracy
ITCDP	- Integrated Teacher Capacity Development Programme
JSS	- Junior Secondary School
KOYA	- Zo Mu Koya Tare (Come let's learn together)
LEARNigeria	- Let's Engage, Assess and Report Nigeria
LGA	- Local Government Area
LRP	- LEARNigeria Remedial Programme
TEP	- The Education Partnership

About TEP Centre and LEARNigeria

The Education Partnership (TEP) Centre is Nigeria's pioneering education partnership organisation with a mission to improve the overall design, implementation, and evaluation of education initiatives through effective, enduring, and scalable partnerships. TEP Centre serves a broad range of education sector stakeholders including policymakers, corporate organisations and foundations, development agencies, donor-funded and assisted programs, civil society organisations, philanthropic organisations, and educational institutions. TEP Centre is signed up to the United Nations Global Compact, adheres to national and international ethics, and prioritises safeguarding and privacy policies when interacting with children and stakeholders respectively. With nationwide presence and regional offices in Lagos and Abuja, TEP Centre has a dedicated team of experts in its various units – Research, Consultancy, Assessment and Learning Programmes, Education Investments and Communications.

At TEP Centre, we believe that education is both a public and private concern and there are roles for each sector in education planning, management and funding. Well-designed partnerships not only have the ability to leverage the strengths of each sector, but also to provide equitable access to functional and stimulating education to teeming masses of Africans.



1. Background

About 90 percent of African children in school cannot read or understand questions related to a 150-word piece, which they should be able to do by age 10. Before the pandemic, it was estimated that 52 percent of 10-year-olds in low- and middle-income countries globally could not read. The last few years have further exacerbated this global learning crisis, and now we have very high levels of illiteracy - estimated to be nearly 90 per cent in sub-Saharan Africa (Robert Jenkins, 2022).

In recent years, there has been a decline in learning outcomes for children, particularly those aged 5-16 (Kuhfeld et al., 2022; Mervosh, 2022), and to increase the already critical gaps in learning, the unexpected COVID-19 pandemic compelled a global wide lockdown. During this period, the Nigerian government implemented school closures in March 2020, which lasted for six months, until September 2020. In this time, according to national reports, at least 22.4 million public elementary school students, 6.8 million lower secondary school students, and 1.7 million undergraduate students did not participate in the conventional in-classroom learning (Ogenyi, M. 2022).

Globally, data on learning loss among school children can be described as devastating, especially with the pandemic-induced lockdown and school closure in most countries, which forced about 1.4 billion children out of school. By the end of 2021, more than 200 school days were lost, equivalent to one-and-a-half academic years (Turner, 2022). The impact of being out of school for that long is a one-two punch – children stop learning and forget much of what they have already learned (Kuhfeld et al., 2022). The poorest in developing countries feel the most severe impacts of learning loss, as is often the case with most crises (LSE, 2021).

Efforts were made to address the learning crisis through various interventions, including early grade reading and maths programs, teacher professional development, inclusive education initiatives, community engagement, gender-sensitive approaches, and education governance and policy reform (World Bank, 2018; UNESCO, 2014). However, progress was uneven across different countries and regions, and the learning crisis persisted as a significant challenge in global education systems.

LEARNigeria, a citizen-led assessment and household survey conducted by The Education Partnership (TEP) Centre in 2017 provides evidence that out of 49,000 children, only 55% of female students in JSS3 attained the reading proficiency of a primary 2 student, while 50% of female students in JSS3 reached the numeracy multiplication-level proficiency of a primary 2 student. This survey was conducted in 21,600 households across six states in 6 geo-political zones in Nigeria, namely; Plateau- North Central, Taraba- North East, Kano- North West, Ebonyi- South East, Akwa-ibom- South South and Lagos- South West. From this data, we can trace the existence of a learning crisis, especially in foundational literacy and numeracy. In facing this learning gap, arises the need for remediative action.

As we reflect on the data on learning loss and the gaps that exist in foundational learning, it becomes paramount to provide solutions that serve as a band-aid for children and improve learning competence in both children and instructors, without derailing the existing education structure. Some of these efforts have been applied through teacher professional development training and differentiated learning approaches developed and implemented by TEP Centre. These

programmes, LEARNigeria Remedial Programme (LRP), Integrated Teacher Capacity Development Programme (ITCDP), and Zo mu koya tare (KOYA), have all achieved an outcome of change in teaching capacity and learning progress of children in foundational literacy and numeracy. The underlying methodology present in these interventions is the use of assessment to inform teaching instructions.

This paper shares the learnings and insights on TEP Centre’s learning programmes in Nigeria. These programmes are directly or incidentally linked to components of assessment-informed instruction to improve FLN. The sections below outline TEP Centre’s learning interventions and their results.

1.1 LEARNigeria survey and assessment

In 2017, LEARNigeria assessed the Foundational literacy and numeracy skills of children in Nigeria, reaching 49,000 children from 21,600 households in 36 LGAs across the 6 geo-political zones of Nigeria. As with other citizen-led assessments, trained volunteers from the communities visited households in rural and urban locations to administer surveys to parents/caregivers and assess children aged 5-15 years. The assessment tools are benchmarked at primary 2 curriculum level of literacy and numeracy.

LEARNigeria data from the previous assessments has been widely discussed at global, national, state and community level. The results have contributed to policy shifts, from inputs to a focus on learning processes and outcomes.

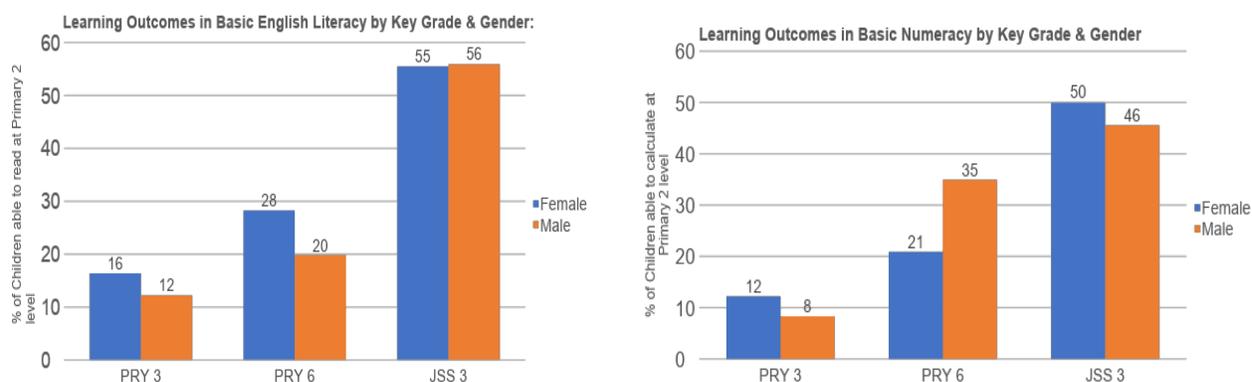


Chart 1 and 2: Data analysis from LEARNigeria assessment on basic Literacy and Numeracy. Results showing learning competence of students in primary 3, primary 6 and JSS3 when assessed with tools benchmarked at primary 2 curriculum.

Basic literacy result: The share of female students in primary 6 who reached the highest level of literacy competence in the assessment was 28%, while the share of male students in primary 6 who reached the highest level of reading competence is 20%.

Basic Numeracy result: The share of female students in JSS3 who reached the highest numeracy level in the assessment was 50%, while 46% of male students in JSS3 reached the highest numeracy level in the assessment.

2. Overview of TEP Centre's Learning Interventions

TEP Centre has conducted a series of research studies using assessment data to inform remedial learning methodologies, and introduced pedagogies with nuances to what learners are customarily engaged with in their classrooms. Some of these programmes include the LEARNigeria Remedial Program (LRP), the Integrated Teacher Capacity Development Program (ITCDP) and the Zo Mu KOYA Tare (Come let's learn together).

2.1 LEARNigeria Remedial Programme (LRP)

LRP is a remedial learning programme that builds on the LEARNigeria citizen-led household assessment data. The programme adapted from the Teaching at the Right Level (TaRL) methodology, enables children who have fallen behind to acquire foundational literacy and numeracy skills. The methodology requires that teaching starts at the "level" of the child and as such the phrase 'teaching at the right level'. The approach has proven to improve the literacy and numeracy learning outcomes of children within a short period. LRP focuses on basic reading and numeracy skills, as these are the essential building blocks for better learning outcomes. The methodology puts the individual child at the centre of learning; it is an effective, interactive programme which helps to bridge the literacy and numeracy skills gap of primary school children who are at least 7 years old. It encourages the use of locally available materials and teaching resources such as cut-out cardboard paper, carton boxes, empty plastic bottles, sticks, small stones for identification of numbers, sounds as well as rhymes, and learning games.

The LRP was piloted in Akwa Ibom and Kano States in 2018, with over 600 children in primary 3, primary 4 and primary 5. After just a few weeks of the intervention, the number of children unable to identify syllables dropped from 71% to 34% in Kano. Significant learning improvements were seen in Akwa Ibom with a 27% drop in syllable recognition.

2.1.1 LRP Model

The LRP was a blended training programme for teachers, researchers with teaching experience and government officials. The LRP methodology leveraged on the principles of accelerated and remedial learning for children in grades 7 to 11. Children were assessed regularly as level appropriate pedagogies were proffered so as to remediate for deficiencies and move them to a higher level as learning progressed. In this model, children were assessed and results from this assessment were used to group them according to their learning competence. In these groups, the children were taught using learning aids that are relatable and effective to move them from the level where they are to a higher level of competence in literacy and numeracy.

Charts 3, 4 and 5 are results from the LEARNigeria Remedial Programme implemented in Kano state.

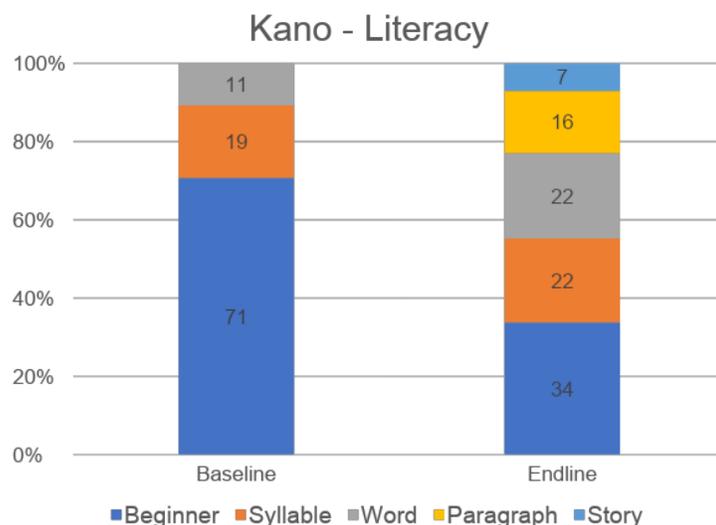


Chart 3: LRP Literacy result of children assessed at baseline and endline, on basic reading skills in Kano state.

Literacy: At baseline, students were assessed using the LEARNigeria Remedial Programme assessment tool benchmarked at primary 2. Results show that 71% of students were at beginner level while at endline, the share of students at baseline dropped to 34%

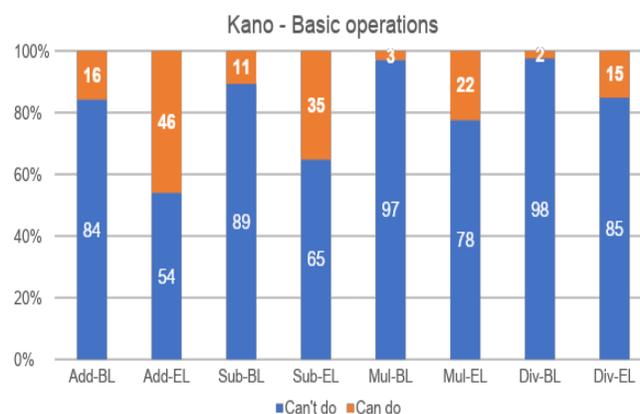
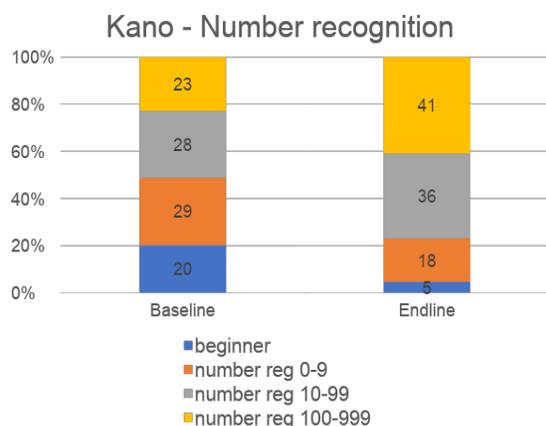


Chart 4 and 5: LRP Numeracy results. Number recognition and Basic operation results of children assessed at baseline and endline, in Kano state.

Number recognition: At baseline, only 23% of students assessed could identify three-digit numbers, while at the endline, the percentage of students who could identify three-digit numbers increased to 41%.

Basic operation: At baseline, only 16% of students could solve simple addition questions while at the endline, the percentage of students who could solve basic addition questions increased to 46%.

In 2019, TEP Centre trained a group of new instructors from all across Nigeria as part of our Train the trainers model, these new instructors similarly conducted their training experience with a learner's intervention in Akwa Ibom in 2019. This training and pilot implementation of the trainer model was in preparation to implement a school-based model with class teachers and teacher volunteers.

2.2 The Integrated Teacher Capacity Development Programme (ITCDP)

The Integrated Teacher Capacity Development Programme (ITCDP) is an integrated and participatory approach to teacher needs assessment and professional development. This leverages on the linkage of teachers' capacity to diagnose learning needs of learners and use data to improve learning outcomes as they share ideas with their peers to map out effective teaching and learning strategies, share resources and develop appropriate lesson plans.

The ITCDP programme assessed the learning levels of children and the needs of their teachers in relation to how they used pupils' assessment results to come up with strategies to support the children's learning as well as their professional growth as they interact in groups to develop effective strategies to help children improve on their learning outcome. The focus area is the use of data by teachers to monitor children's learning and also design strategies to support learning development.

Consequently, the programme proposes a process where teachers learn about deficiencies in student learning through authentic data on learning competence, reflect collectively teaching and learning challenges, plan for effective solutions, implement these plans, and examine the next cycle of data to evaluate the success of their pedagogy on learning.

The ITCDP was implemented in two states in Nigeria - Akwa Ibom and Kaduna - with its concentration in Ikot-Ekpene and Eket LGAs, and Kajuru and Kaduna South LGAs respectively. The programme was implemented and monitored in 3 cycles (these cycles are the three terms that make up a school year in Nigeria).

A total of 746 teachers were trained across 80 schools in both target states. At the end of the programme, results indicate that the capacity of teachers on using assessment data to identify student learning gaps and track improvements or declines in student performances over time increased by 29%. These teachers were trained on interpreting individual student data and presenting this data in statistically illustrated form. They engaged with their peers through peer-reflection on the outcome of their classroom practice, and designed or modified customised action plans to improve the learning outcome of students.

Ultimately, the average mathematics and reading achievement levels of the target students in Akwa Ibom progressed in literacy by 79.1 points (scaled scores), while students in Kaduna progressed by 43.1 points (scaled scores).

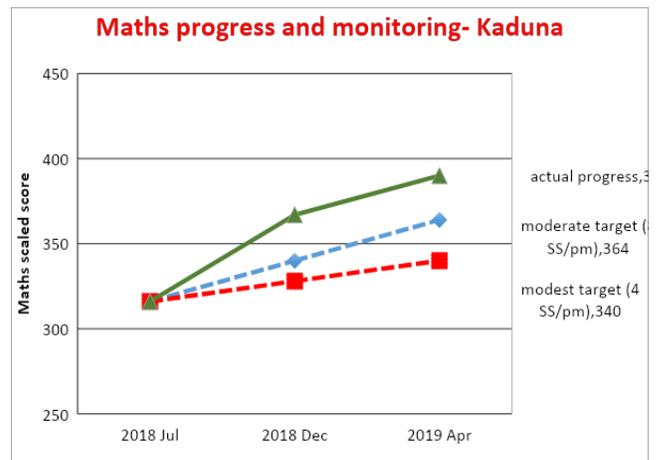
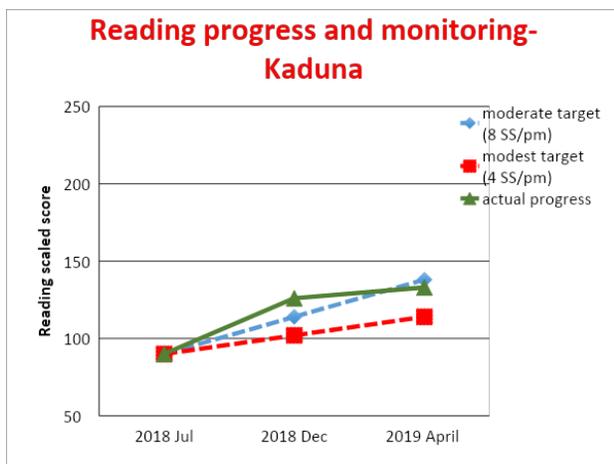


Chart 6 and 7: Reading and Maths performance of students assessed across three cycles of the ITCDP in Kaduna state.

Reading: At baseline, results from reading assessment show that the level of students assessed were at 90.2, at midline assessment, the results increased to a scaled score of 126 and at endline, the level of reading among students assessed was 133.3. These result trends show a total of 43.1 scaled increase in reading capacity of students across the three cycles.

Maths: At baseline, results from maths assessment show that the level of students assessed were at 316.4, at midline assessment, the results increased to a scaled score of 367.4 and at endline, the level of reading among students assessed was 390.4. These result trends show a total of 74 scaled increase in maths capacity of students across the three cycles.

2.2.1 ITCDP Model

This intervention was directed at head teachers and class teachers. The methodology involved assessing a select number of students in primary classes at three cycles. The assessment results are then presented to the class teachers in an easy to read format (graphs and charts).

Using information on the results, the teachers were trained on data visualisation, interpretation and innovative teaching practice strategies to help them improve pedagogy and target increase in learning outcome of these students. The teachers are also coached on methods they can apply to have rich reflective sessions that improve professional peer development, strategize and implement effective ways for better results from the students. By the end of the 3rd cycle, teachers were competent enough to collect proper data from their students and use the information provided to map out strategic plans for teaching FLN.

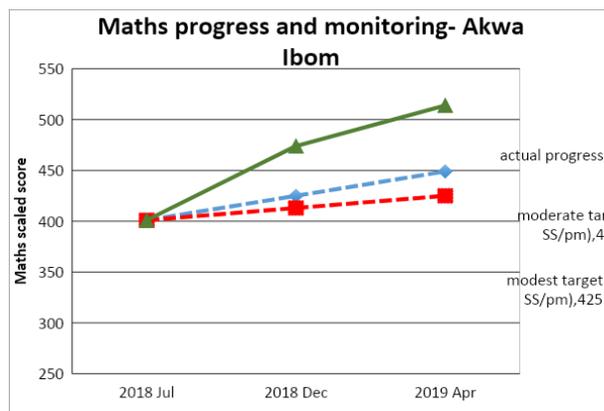
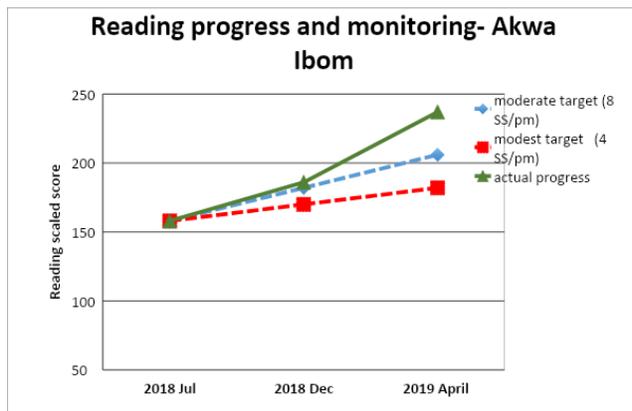


Chart 8 and 9: Reading and Maths performance of students assessed across three cycles of the ITCDP in Akwa Ibom state.

Reading: At baseline, results from reading assessment show that the level of students assessed were at 157.6, at midline assessment, the results increased to a scaled score of 185.9 and at endline, the level of reading among students assessed was 236.7. These result trends show a total of 79.1 scaled increase in reading capacity of students across the three cycles.

Maths: At baseline, results from maths assessment show that the level of students assessed were at 401, at midline assessment, the results increased to a scaled score of 474.2 and at endline, the level of reading among students assessed was 513.9. These result trends show a total of 112.9 scaled increase in maths capacity of students across the three cycles.

2.3 Zo Mu Koya Tare (Come Let's Learn Together) KOYA Project

The global challenges of 2020 necessitated a revision of our implementation model to include methods that incorporate remote training and learning opportunities for instructors and children.

Therefore, in order to reduce the rate of learning declines for children - particularly those with limited access to the alternative education programming delivered by governments via online platforms, educational television, and instructional radio, TEP Centre designed and implemented the "Zo Mu Koya Tare" programme. This programme designed by TEP Centre is a low-tech remedial learning solution for foundational literacy and numeracy. For Koya, targeted SMSs with teaching and learning instructions were customised in English and Hausa. These instructions were modified from a customised syllabus adapted from TEP Centre's LEARNigeria Remedial Programme (LRP), and were delivered via text messages to basic feature phones. In addition to these targeted SMS instructions, supplementary instructional workbooks were distributed to caregivers in the households to support their child's learning process.

2.3.1 KOYA Model

The Koya project utilised the methodology of supporting parents and caregivers in the household who had daily access to the children in their homes. Parents and caregivers were sent SMSs containing FLN instructions used to coach children on how to solve basic arithmetic problems or reading components. A supplementary workbook including step by step instructions on tackling foundational literacy and numeracy topics like letter identification, word formation, number identification and basic operations, was designed and printed specially for this programme as an additional aid for both caregivers and children.

The pilot of this programme was implemented in two LGAs (Gaya and Gwarzo) in Kano state in 2021, and was scaled up, in the same year, to 15 communities in 4 LGAs (Gwale, Ungogo, Gaya and Fagge) in the same state.

This SMS-based teaching and learning intervention was implemented over 8 weeks, and recorded a 6 to 15% increase in learning outcomes. In addition to improving the learning outcome of children, KOYA also provides evidence that home-based learning, using low-tech solutions, should be explored and scaled to provide educational support for improving instructor competence and learning outcomes. The number of children who participated at both baseline and endline evaluation was 3,134, while the programme reached over 1,500 caregivers (instructors).

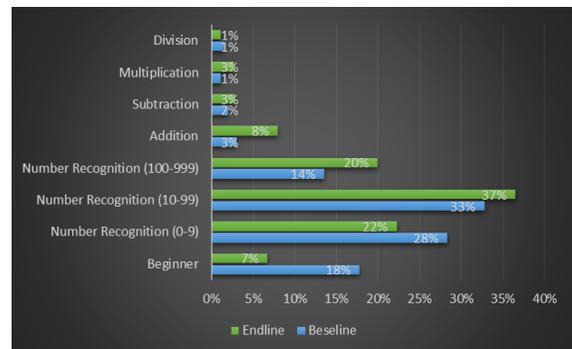
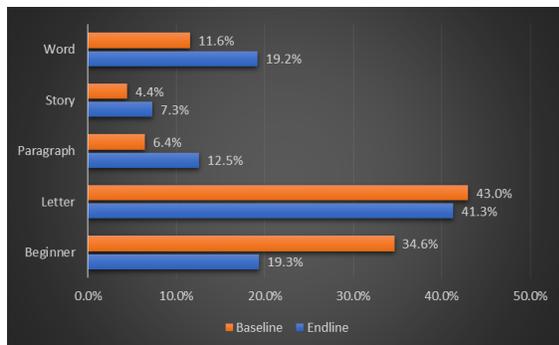


Chart 10 and 11: Literacy and Numeracy outcome of children who participated in the KOYA -SMS-based learning intervention- at Baseline and Endline

Literacy: At the baseline out of 3,134 pupils enrolled, 1,050 of the pupils were able to move from beginner level, of not being able to identify letters of the English alphabet, to other levels, representing a 33.5% improvement in the pupil's foundational literacy competence end line.

Numeracy: At the baseline out of 3,134 pupils enrolled, 1,096 of the pupils were able to move from beginner level of numeracy, that is, not being able to identify one-digit numbers, to other levels representing, 35% improvement in the pupil's numeracy level at endline. In the numeracy chart, the decline in results for children at beginner and one-digit number recognition levels showed that children moved up to higher levels, after the intervention, at the endline assessment.

3. Learnings and Recommendations for scale

In the course of our experiences on these learning teaching and interventions, we have identified a few key points that will be necessary for scaling up assessment informed instruction programmes that improve FLN learning outcome. They include;

1. Learners have a better chance of improving their learning capacity when grouped according to their level of competence.
2. Incorporating relatable, fun and child-centred engaging activities in learning is a more effective pedagogical approach to improving learning outcomes.
3. By encouraging and participating in reflective sessions, teachers are able to build a community of good practice of supporting each other by sharing experiences, learning, pedagogy and resources that can improve the quality of teaching instructions.

4. Community advocacy and participation is essential for increasing grassroots awareness on programme interventions, education performance and support of all stakeholders.
5. Frequent needs assessment and feedback to key stakeholders will increase the rate of positive response and support for the development and implementation of effective policies towards improving learning outcomes.
6. Monitoring the pace of learners with the use of formative assessments to create learning profiles of students, and informing teaching instructions is a key factor in improving learning outcomes.

4. Conclusion

In conclusion, it is imperative to highlight that the intervention programmes carried out by TEP Centre depend largely on interpreting assessment data and tailoring teaching practices to students' competence level. The approach of grouping students and teaching them according to their level of understanding is a key determinant on their pace of learning and improving learning outcome.

The bedrock of quality education lies with childrens' ability to fully understand and comprehend learnings in foundational literacy and numeracy, therefore, it is essential that facilitators are equipped with the trainings (through interventions or professional development programmes) and tools that build their capacity for engaging with young learners with the aim to perform at the highest level of standards appropriate for engaging young learners and building their learning competence.

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