The importance of basic literacy and numeracy skills

Good reading skills are the foundation for any subject as students cannot learn mathematics or science without being able to follow written instructions or understand textbooks. The ability to read and understand text is the most fundamental skill a child can learn. Thus, a renewed focus on early grade reading is imperative so that children learn to read in the early years of school.

However, despite Tanzania’s improving access to primary education, with a primary net enrolment rate of 91.1% recorded in 2017-18, achievements in learning outcomes have been slow to come. Uwezo’s 2011-2015 assessment revealed that only four out of 10 Standard 7 students were able to read or count at Standard II level. Furthermore, the National Baseline Assessment for 3Rs indicates that 40 percent of pupils scored zero in reading comprehension, 43.8 per cent scored zero in sentence dictation and, although students are reading Kiswahili orally with reasonable accuracy (62%), their fluency, at 18 correct words minute, is far behind the standard 40-45 correct words minute for standard 1-II.

These findings clearly demonstrate that most students do not have adequate reading skills, which will significantly affect their future learning outcomes.

To address these deficiencies, EQUIP-Tanzania supported the Ministry of Education, Science and Technology (MOEST) and the President’s Office for Regional Administration and Local Government (PORALG) to improve literacy and numeracy in its nine programme regions of Dodoma, Katavi, Kigoma, Lindi, Mara, Shinyanga, Simiyu, Singida, and Tabora, primarily through strengthening teacher competencies via in-service training (INSET) and the provision of supplementary resources.
The national policy context

A key shift in policy within Tanzania has been towards a competency-based early grade curriculum. This has led to a significant change in the early-grade primary school curriculum, both what is being taught and how, through a more effective pedagogical approach. In 2015, the government introduced a new competency-based curriculum for standards I and II. Subjects taught were drastically reduced to focus more on reading, writing and arithmetic skills (3Rs).

The new curriculum, syllabi and teachers’ guides promote a phonics approach to teaching children to read, which was new to most teachers. Since 2016, the government has introduced a revised curriculum for Standards III and IV, which follows on from the Standards I and II curriculum in approach, but has more advanced content. The Literacy and Numeracy Education Support programme (LANES) has been a key driver of curriculum reform and this programme, together with EQUIP-Tanzania, is providing materials and in-service training (INSET) to support teachers across the country.

In 2010, MOEST developed and piloted a National Teacher Competency Framework (NTCF) led by the Teacher Education Department, with contributions from Teacher Training College (TTC) representatives and UNICEF. The purpose of the NTCF was to provide a common reference point for making explicit the knowledge, skills, actions and attributes that characterise good teaching practice. Additionally, MOEST and the Tanzania Institute of Education (TIE) launched the 3Rs national initiative in 2014/2015 to improve the quality of instruction and pupil performance at Standards I and II in three important learning areas: reading, writing, and arithmetic.

EQUIP-Tanzania has supported school-based INSET since 2014 through the development of modules and supportive materials. These modules are offered to teachers on a school-based approach, and their aim is to promote cooperative group learning among teachers to enhance the quality of teaching and learning. This approach is designed to support teachers to develop pedagogical competencies linked to the new syllabus on reading, writing and arithmetic (the 3Rs). This decentralised, cost-effective, school-based INSET model enables continuous professional development (CPD) for all early grade (Standards I and II) teachers.

By 2019, the EQUIP-Tanzania INSET programme had seen the completion of the first set of 13 modules on literacy, which included an introduction to general pedagogy. The intervention provided 15 days’ training, in three phases outside the school, as well as at least 13 group learning sessions within school. INSET for teaching early grade mathematics was started in 2017 with the rollout of the first nine modules of a 13 module programme. Further, a module on gender-responsive pedagogy was supported in the second half of 2016.

The INSET training cycle

Beginning in 2014, the INSET training cycle has been conducted at national, regional and district levels. It is a cascade model where the quality mitigation strategy is to ensure that each level of facilitators is responsible for quality assurance and backstopping the subsequent training level.

Core Technical Team

The INSET programme has been supported by a Core Technical Team formed by Tertiary Coordinating Institutions and EQUIP-Tanzania. The role of this small team has been to plan and organise the rollout of INSET training at all levels.

Level 1: National Training

National facilitators received training from the Core Technical Team. The national facilitator team comprises staff from PO-RALG, Tanzania Institute of Education (TIE) and MOEST. In addition, the group includes faculty of 20 Tertiary Coordinating Institutions (TCIs) which deliver training to nine regional training centres.

Level 2: Regional Training

The District INSET Team from the Teachers Training Colleges (TCIs) receives training from the TCIs. The training modality has been reflective, interactive and participatory to ensure full and active participation. The practice integrates competencies in the 13 literacy and 13 numeracy INSET modules and the 15 INSET videos to enhance the school-based INSET sessions.

Level 3: District Training

The first phase of training engages Head teachers, subject teachers (for literacy or numeracy training), Ward Education Officers (WEOs) and the school-based INSET coordinator for one day. The second phase of training involves the subject teacher and school-based INSET coordinator for five days. The training is intended to integrate all competencies.

Teachers who have participated in school-based INSET are now used to working collaboratively in their school and ward and are creating communities of learning.
Key partnerships for INSET

In order for INSET to be implemented effectively, EQUIP-Tanzania had to work closely with TCIs, TCIs, PO-RALG, MOEST and the TIE for materials development and approval for national use.

The TTCs team were mainly drawn from college tutors. They supported EQUIP-Tanzania in the materials review and pretesting. They also conducted training at the district level and ward cluster reflection back up.

Participants from TCIs were drawn mainly from lecturers from contracted universities. They worked with EQUIP-Tanzania as national trainers and conducted training for District INSET teams at the regional level as well as follow up at the district level training.

Module description

There are 13 literacy modules focusing on the following competencies:

- Reading aloud
- Sound awareness
- Letter sounds, letter names and syllables
- Phonics
- Vocabulary
- Decoding and blending
- Comprehension
- Basics of writing
- Establishing routines in a print rich environment
- Classroom management strategies
- Student assessment and supporting struggling learners
- Increasing gender equity and participation
- Reading fluency

The literacy modules were each accompanied by eight literacy videos which focus on the following competencies:

- Teachers reading aloud
- Phonemic awareness
- Letter names and sounds
- Phonics strategies
- Vocabulary development
- Decoding and blending
- Comprehension activities
- Early writing

Numeracy modules

There are 13 numeracy modules focusing on the following competencies:

- Examining the revised Maths syllabus
- Teaching aids to develop number concepts
- Pupil learning activities to develop number concepts
- Teaching aids for counting and operations
- Pupil learning activities for number concepts
- Pupil learning activities for counting
- Pupils learning activities for addition and subtraction up to 20
- Pupil learning activities for addition beyond 20
- Pupil learning activities for subtraction beyond 20
- Pupil learning activities for recognising shapes
- Pupil learning activities for measurement
- Pupil learning activities for fractions
- Looking at data

Tabora region has seen the highest module completion rate (97%).
The numeracy modules were accompanied by six numeracy videos which focus on the following competencies:

- Stories and use of counters, band of ten and number cards to bring life to learning Maths
- Sing songs and use number lines and number charts to make learning math interactive
- Use place value charts to demonstrate vertical adding and subtracting
- Use number bonds to put numbers together and break them apart
- Recognising shapes and dividing them into fractions
- Measure things and using the results as data

For all of the modules, INSET training material development passed through different stages and involved different stakeholders. First, materials were developed by consultants guided by the national syllabus and national curriculum. Thereafter, translation and reviewing was conducted in collaboration with TIE and PO-RALG. The TIE then approved the material for printing and utilisation.

The programme developed 15 videos to support teachers on literacy, numeracy and creating safe and positive learning environment. Out of 15 videos, eight videos were for literacy, six videos for numeracy and one video for positive and safe learning environment. The videos were distributed to schools via SD cards. They are also available on the EQUIP-Tanzania Youtube channel.

Gender Responsive Pedagogy

Teachers are central to ensuring teaching and learning processes are inclusive. Their understanding, awareness and practical learning on Gender Responsive Pedagogy (GRP) is key to the effective participation of girls and boys in classroom practice. GRP training intended to actively engage the head, hand and heart to make teaching and learning processes explicitly gender responsive.

Engaging the head means that the training aims to help teachers to plan and develop concepts to enable teachers to understand teaching and learning practices, and to be gender responsive.

In engaging the hand, the GRP training manual contains ‘Think. Pair. Share’ and group activities to enable teachers to develop practical skills and competencies to understand and respond to the specific needs of girls and boys in the teaching and learning processes.

The GRP training also engaged the heart as it contains practical activities and reflection of gender guided by teaching and learning processes which emerge within the local social context. This means that the training aimed to transfer the passion and values of gender responsive pedagogy into behaviour of teachers’ life and daily learning practices.

The GRP training was conducted in the same way as other INSET training cycles. It had three levels mainly national, regional and district level. However, the national training facilitator received training directly from the Core Technical Team. The national facilitators’ team was formed by 14 experts who delivered training at nine regional training centres.

The regional facilitators conducted training in two levels at district level. The first level engaged Ward Education Officers, Head Teachers and INSET coordinators for one day. The main objective is to create awareness on the GRP concepts and practice to school supporting system. The second phase engaged the gender focal person and INSET coordinators for three days. The training scope is to equip them with competencies on gender responsive pedagogy, facilitation skills to enable them to facilitate the same training during school-based session. Further, the training identified the gender responsive pedagogy activities which had to be conducted by school-based gender focal person at school level.

By 2017, 76% of teachers in EQUIP-Tanzania’s target regions had completed the GRP module.
In Somanda B Primary School, Simiyu, a total of 36 pupils from standard three to standard six did not know how to read and write. From March to June teachers took the initiative and all students are now competent in 3Rs.

“After several school-based INSET sessions, my teaching skills have improved and I am now more confident in teaching. It took us a few months for all pupils to know how to read and write, and that is a great achievement for the school, currently, there is no pupil in the school who does not know how to read and write.”

Mukwaya M.
Standard Two teacher

“In Mwanulu Primary School, Shinyanga, school-based INSET for teachers has reduced the number of children with 3Rs’ problems. Now, 90% of Standard 1 children up can read and write compared to previously where children finished Standard II and still could not read and write.”

Yulietha Nzela
WEO from Mwataga ward

Impact

By the time of the EQUIP-Tanzania’s Midline evaluation in 2016, there was already strong evidence that EQUIP-Tanzania had had a positive impact on Kiswahili literacy skills for poorer performing pupils. EQUIP-T has significantly reduced the proportion of Standard 3 pupils in the bottom performance band for Kiswahili. Pupils in programme schools have improved their early grade Kiswahili skills markedly, and part of the gain is due to EQUIP-Tanzania, over and above the positive national trend. In most of the EQUIP-Tanzania districts many of the children come from non-Kiswahili speaking families, so this is a considerable achievement.

The impact evaluation evidence suggests that the likely channels through which EQUIP-Tanzania has contributed to learning gains in Kiswahili is by making teaching practices more inclusive through its Kiswahili teacher in-service training (INSET) programme, and by reducing teachers’ absence from the classroom, resulting in more instructional hours for pupils. By the Endline evaluation report, the programme had moved more children into the top band, for Kiswahili.

In Mathematics, the INSET training programme had an impact between Midline and Endline in maintaining Mathematics scores: in the absence of the programme, Maths performance would have dropped. These results clearly show that the INSET training programme has had some success in achieving its overall impact-level goal. In addition, there is evidence that the programme has contributed to larger gains for girls: teacher interactions with pupils became more gender-balanced, though this improvement was seen between baseline and midline even though specific gender response pedagogy training was rolled out after midline (OPM report 2019).
The Midline review notes that teachers consider learning different new teaching techniques as one of the main benefits of the school-based training. Teachers are already reporting greater awareness of disability inclusion issues as a result of the training. The evaluation concluded that EQUIP-Tanzania support has had a positive effect on early grade teachers’ motivation, as they feel more confident.

**Mainstreaming and sustainability**

EQUIP-Tanzania is influencing the national approach to teacher professional development. Teacher training materials for literacy and numeracy are being embraced by both Government and other development partners. Furthermore, Teacher Training Colleges and universities involved in the INSET training programme have been adapting their programmes based on what they have learnt. This means that teachers undertaking pre-service teacher training are also benefiting from the good practices which the programme introduced.

The challenge ahead is to transform school-based INSET sessions into sustainable school-level communities of learning that can enable contextualized, autonomous professional development for teachers after the EQUIP-Tanzania programme ends.

**Lessons learnt**

Improving teacher performance aims to improve the professional capacity and performance of teachers in the classroom as well as in the broader community. School-based training provides a low-cost, effective model for providing professional development for all teachers on a continuous basis.

Several classroom practices that saw minimal or no progress remain and require further improvement, such as teachers’ probing pupils’ answers, using regular pupil assessment and bringing the whole class together to summarise learning.

Strengthening the practice of peer feedback and learning is a low cost and effective approach to school-based continuous professional development. Teachers should continue literacy and numeracy refresher sessions to ensure continued focus and improvements to early primary learning outcomes.

EQUIP-Tanzania has not been resting on its laurels and PORALG has taken the ownership for the approvals and the implementation. Based on the lessons learned and listening to teachers, more training on general effective pedagogy is being implemented. Manuals covering “Managing Large Classes”, “Formative Assessment” and “Inclusive Education” have been developed, trialled and warmly welcomed and approved by the Tanzanian Institute of Education. Training will be rolled out in 9 regions during July and August 2019. Teachers are now used to working collaboratively in their school and ward communities of learning and these modules once again emphasise the effective approach of reflective and responsive teaching. Literacy and numeracy are not isolated topics but lie within a context where there is a diversity of learners, often learning in large classes.

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1. Annual Education Sector Performance Report (AESPR) for 2017/18
3. National Baseline Assessment for 3Rs (Reading, Writing, and Arithmetic) in Tanzania, December, 2015
4. EQUIP-Tanzania is an UKAID-funded, Government of Tanzania programme targeted at improved quality of education. One of its aims is to enhance teacher performance using a comprehensive framework clarifying necessary competencies of teachers, school-based training, performance criteria, targets, appraisals and strategies to boost morale and improve professional capacity and performance of 49,000+ teachers, representing one quarter of the primary education system in Tanzania

For more information about EQUIP-Tanzania visit:  
www.equip-t.org  
info@equip-t.org  
EQUIP_Tanzania  
equiptanzania.equip.tanzania