

NECT Monitoring and Evaluation

Driving evidence-based
education reform

Jan, 2014 - May 2018

About the NECT

The work of the NECT is focused on designing, testing and mainstreaming interventions that will support the Department of Basic Education (DBE) in reaching the NDP goal of 90% of learners achieving at least 50% for maths, science and languages by 2030. The achievement of the NDP goals heavily depends on an evidence-based education reform which is at the centre of the operations of the NECT.

The NECT as one of the programmes responding to the NDP has taken up this call for action and has initiated various programmes that drive efforts to improve learning outcomes in schools. This is partly done through monitoring of the implementation of the programmes by the Monitoring and Quality Assurance (MQA) team and evaluations undertaken by external evaluators.

This publication presents the monitoring and evaluation outputs from the NECT programme. The outputs outlined in this document largely relate to the NECT's schools and district improvement programme. An evaluation framework covering all programmatic areas (1-8) of the NECT is available at

www.nect.org.za/publications/nect-and-sector-documents/



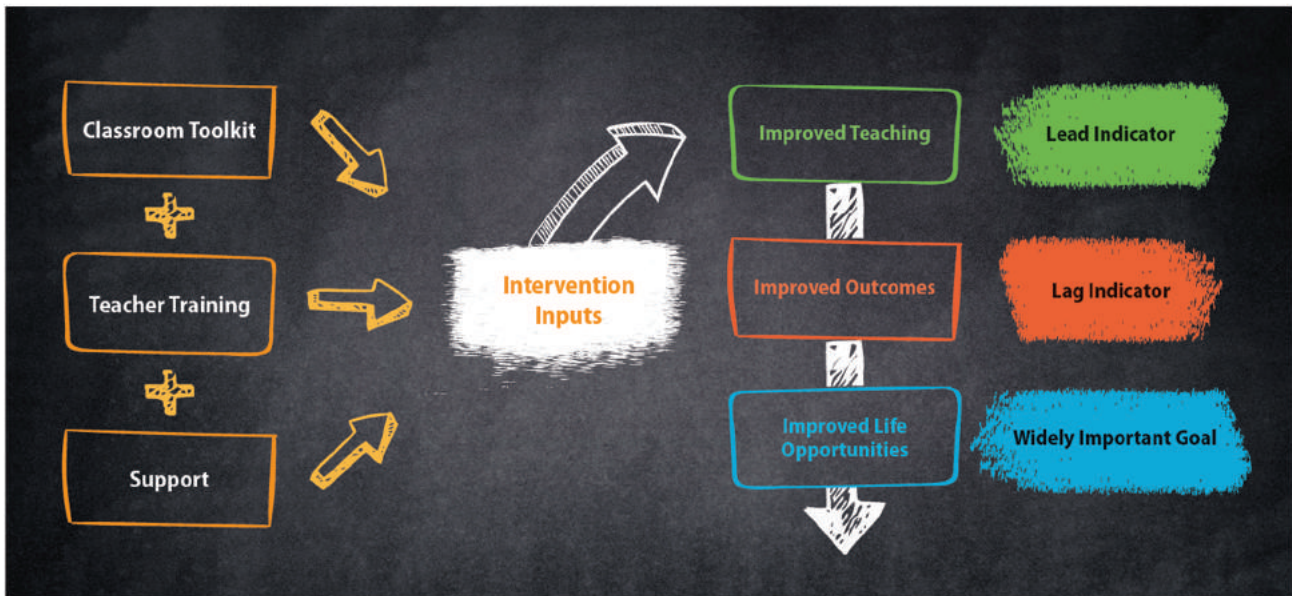
Theory of Change

School Improvement

The NECTs school improvement programme and the Monitoring and Evaluation design draw lessons from several large scale interventions.

The intervention design starts by outlining a macro-level change theory presented in Figure 1 below.

Change Theory for Teacher Professionalisation



The theory of change was used to develop an indicator framework that informs MQA activities in order to regularly monitor and report on progress. The framework centres on intermediate outcomes which are measurable in the short to medium term. Whilst all programming is ultimately aimed at the longer-term goal of improving teaching and learning outcomes, the challenge is to identify and track changes in teaching and learning outcomes which lead to longer term sustainable change in learning outcomes.

Indicator framework

An indicator framework informs monitoring, evaluation and quality assurance of the District Improvement Programme (Prog 1).

The indicator framework covers the 5 core areas of the District Improvement Programme including:

- Teacher professionalisation
- Courageous leadership
- District development
- Parent and community Involvement
- Learner welfare

The excerpt below provides an example of the indicators for teacher professionalisation.

Teacher Professionalisation

Outcome Statement	Intermediate outcomes	Indicators	Data Frequency	Data Sources
3. Improved professional practice of teachers to enhance learner achievement as per ISPSTE	3.1. Increased teacher content knowledge and skills in Maths, Science and Languages	3.1.1. TP - Change in teacher content knowledge and skills after training	3.1.1 Periodic	Evaluation reports, data from ETDP SETA and other sources
		3.1.2. TP -Increased capacity of using ICT in teaching	3.1.2 Quarterly	Evaluation reports, data from ETDP SETA and other sources
	3.2. More effective use of teaching and learning resources	3.2.1. TP - Evidence of use of trackers, learning programmes, DBE workbooks and other resources (sample)	3.2.1 Quarterly	Quarterly reports from implementing teams
	3.3. More effective assessment practices with evidence	3.3.1. TP - Formal assessment tasks are appropriate to age, cognitive level, grade and subject (Used as designed)	3.3.1 Quarterly	Reports from implementing teams on support to teachers
		3.3.2. TP - Number of minimum assessment tasks administered as per CAPS (sample)	3.3.2 Quarterly	Reports from implementing teams on support to teachers
	3.4. More effective curriculum planning, management and coverage	3.4.1. TP - Evidence of work plans for the term and weekly lesson plans (sample)	3.4.1 Quarterly	Reports from implementing teams on in school support to SMTs
		3.4.2. TP - Percentage of curriculum covered in line with CAPS (sample)	3.4.2 Quarterly	Reports from implementing teams on in school support to SMTs
		3.4.3. TP - Weighting of content areas per subject in line with CAPS	3.4.3 Quarterly	Reports from implementing teams on support to teachers
	3.5. Enhanced classroom management practices	3.5.1. TP - Evidence of differentiation in classroom practice to manage diverse abilities	3.5.1 Periodic	Reports from implementing teams on support to teachers
		3.5.2. TP - Existence of classroom rules and standards of behaviour	3.5.2 Periodic	Reports from implementing teams on support to teachers
		3.5.3. TP - implementation of a class homework timetable as per school policy	3.5.3 Periodic	Reports from implementing teams on support to teachers

Building capacity of the state

Since its inception NECT has invested in establishing dedicated M&E capacity, initially with technical support provided through the JET Education Services (JET), and support from partners including Zenex Foundation. An M&E Advisory Committee was established to advise on M&E design and methods. The committee comprises independents and meets annually.

A key component of the NECT's approach has been to build and transfer skills in monitoring and evaluation at district level. Subject Advisors play a critical part in supporting schools and teachers, often under difficult circumstances and limited resources. Monitoring and reporting on teaching and learning improvement is part of their remit which NECT aims to strengthen by using more and better evidence. As part of this strategy, Subject Advisors are the first line recipients of training in Learning Programmes; they are supported to train teachers; they are always part of the teams monitoring curriculum coverage and other outcomes at school level; and they fulfil an essential role in reviewing and quality assuring all materials used in teacher professionalisation.

What have we done?

The following sections present short descriptions of the M&E projects completed and highlights of the findings.

Mathematics and Science Teacher Development (2016-17)

This project was based on a collaboration between DBE, NECT, ETDP SETA and CASME. CASME was the lead service provider. The overall project objective was to provide a short course to teachers in mathematics and science in the FET band in three provinces (KZN, Limpopo and Eastern Cape) and within two districts in each province. The programme involved 472 teachers (147 teachers from EC, 147 teachers from KZN and 178 teachers from Limpopo) over a 9 days long content training. In keeping with good practice, pre and post assessments were conducted with the trainees.

Table 1 and 2 show the comparative analyses of the pre and post-assessment outcomes in Maths and Science respectively.

Table 1: Comparison of achievement levels in pre- and post-test in Mathematics

Tests	Below 29%	30% - 39%	40%-49%	50%-59%	60%-69%	70%-79%	above 80%	Sample
Pre-TOTAL	84	36	24	20	13	10	1	188
Pre-Average %	44.7	19.1	12.8	10.6	6.9	5.3	0.5	100
Post-Total	39	27	30	31	27	23	16	193
Post Average %	20.2	14	15.5	16.1	14	11.9	8.3	100

- 76.6% achieved less than 50% for the pre-test and this proportion of teachers was reduced to 49.7%. This is still a substantial number of teachers who are performing well below the expected standard.
- There was an increase at the top achievement levels, from 5.8% in the pre-test to 20.2% in the post test

Table 2: Comparison of achievement levels in Pre- and post-test in Science

Tests	Below 29%	30% - 39%	40%-49%	50%-59%	60%-69%	70%-79%	above 80%	Sample
Pre-TOTAL	80	33	24	20	26	22	11	216
Pre-Average %	37	15.3	11.1	9.3	12	10.2	5.1	100
Post-Total	28	17	28	37	22	29	31	192
Post Average %	14.6	8.9	14.6	19.3	11.5	15.1	16.1	100

- 63.4% achieved less than 50% for the pre-test and this proportion of teachers was reduced to 38.1%.
- Increase at the top achievement levels where 31.2% achieved above 70% compared with only 15.3% for the pre-test.

The full report can be accessed from www.nect.org.za/publications/technical-reports/

Tracking in Fresh Start Schools (FSS)

NECT has monitored teaching and learning outcomes closely in 415 Fresh Start Schools since 2015. Data from these schools is collected annually during Term 4 in six districts located in four provinces. These districts are Bohlabela (MP), Bojanala (NW), Libode and Mount Frere (EC), Vhembe and Waterberg(LP). In keeping with NECT’s priorities, data is collected on work completed by learners in Mathematics, English FAL and Natural Science at Grade 3, 4, 6, 8 and 9. Learner assessments have been conducted in Grade 3 (EFAL) , Grade 4 (Maths and EFAL).

PLANNED M&E PROJECTS: In 2018, new assessments will be implemented in Grade 4 & 8 (Nat Science) and Grade 8 EFAL. These studies provide the basis for measuring changes over time, specifically in curriculum coverage, work completed by learners and time on task.

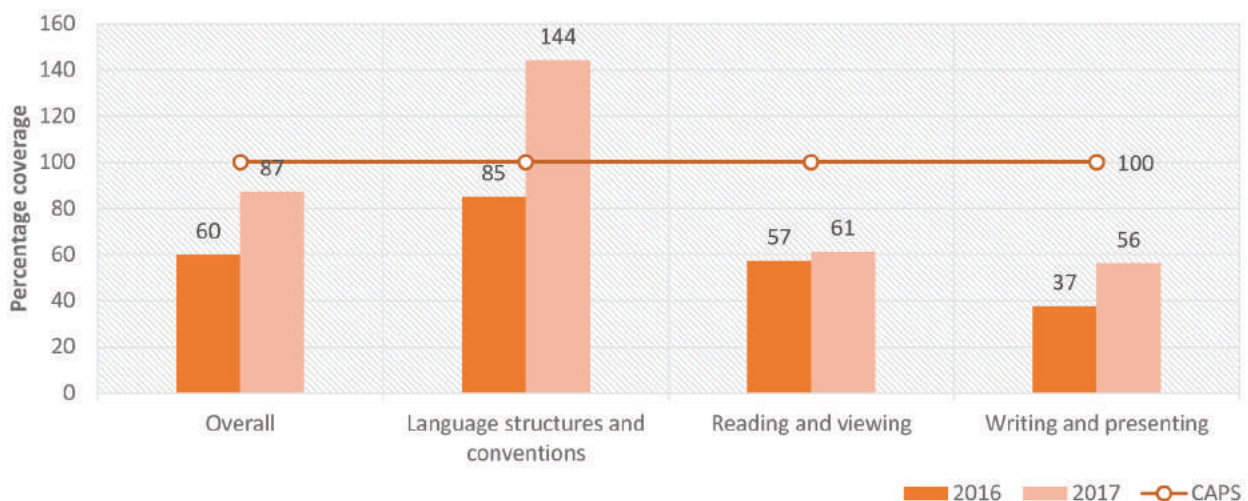
What do the findings tell us so far?

- In 2015/16 the findings confirmed that overall curriculum coverage was low in most schools
- Furthermore, curriculum coverage was uneven across skill areas. Teachers spend more time on the less complex skills, e.g. inadequate time on writing in English and little attention to space and shape or data handling in Maths.
- Essential support resources such as the DBE workbooks were poorly used, if hardly at all in higher grades.
- Many teachers were unaware of the curriculum delivery requirements in the national policy.
- Written work, a key indicator of quality and quantity was far below the norm
- Time on task is affected by a number of factors (memorials services, strikes, lengthy assessment periods at the end of terms) which impact on adequate coverage
- By 2017, data indicates that progress is happening in curriculum coverage. More work is being completed and in some districts more teaching of higher order skills is taking place
- The challenge in 2018 is to increase the pace of work completed and focus on more learning in higher order skills

The figure below illustrates changes in learning outcomes in the Thabazimbi district over 2016-2017 year and the importance of teaching higher order skills.

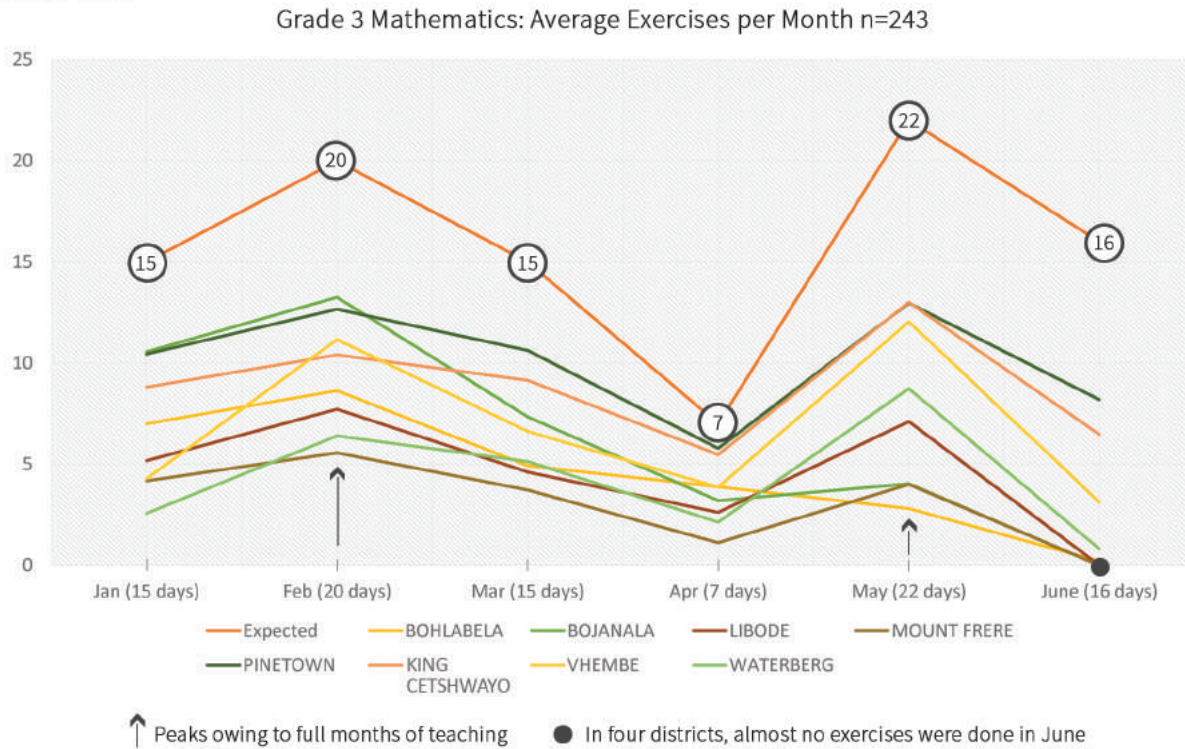
Curriculum coverage

Grade 4 EFAL: Average percentage coverage 2016-2017



The figure below illustrates the number of days on which work is done by learners in relation to the days available in the school calendar. Holidays in April and the June/July period typically mean that little work is completed and an increase in output which often coincides with formal assessments.

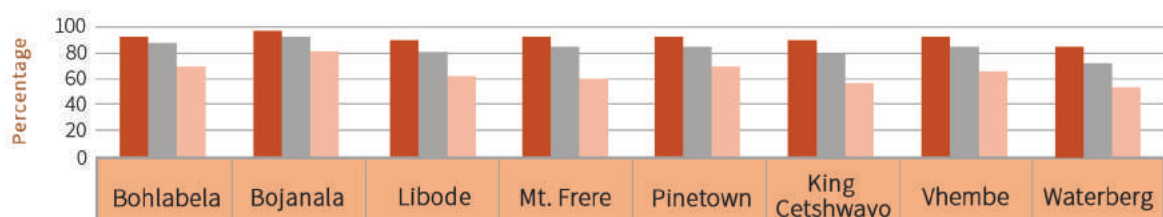
Time on task



Tracking in the First Level Scale Up: Universalisation Programme

Universalisation involves taking interventions which have been provided to Fresh Start Schools to all schools in the districts involved in the District Improvement Programme. School improvement should ultimately be measured by learner achievement outcomes. In 2017 NECT conducted learner assessments in English (Gr 3) and English and Mathematics (Gr 4) to begin monitoring changes in learner performance. Mathematics was not assessed in Grade 3 because it is taught in Home Languages. The figure below reflects the assessment outcomes from 401 schools in 8 districts.

Grade 3 EFAL Assessment Results per district



	Bohlabela	Bojanala	Libode	Mt. Frere	Pinetown	King Cetshwayo	Vhembe	Waterberg
Pass at 30%	93.51%	96.82%	90.34%	92.08%	90.56%	89.89%	91.12%	83.15%
Pass at 40%	87.87%	91.39%	81.31%	83.58%	83.62%	78.85%	83.60%	72.04%
Pass at 50%	68.41%	78.68%	62.62%	60.41%	69.75%	57.34%	65.35%	52.96%

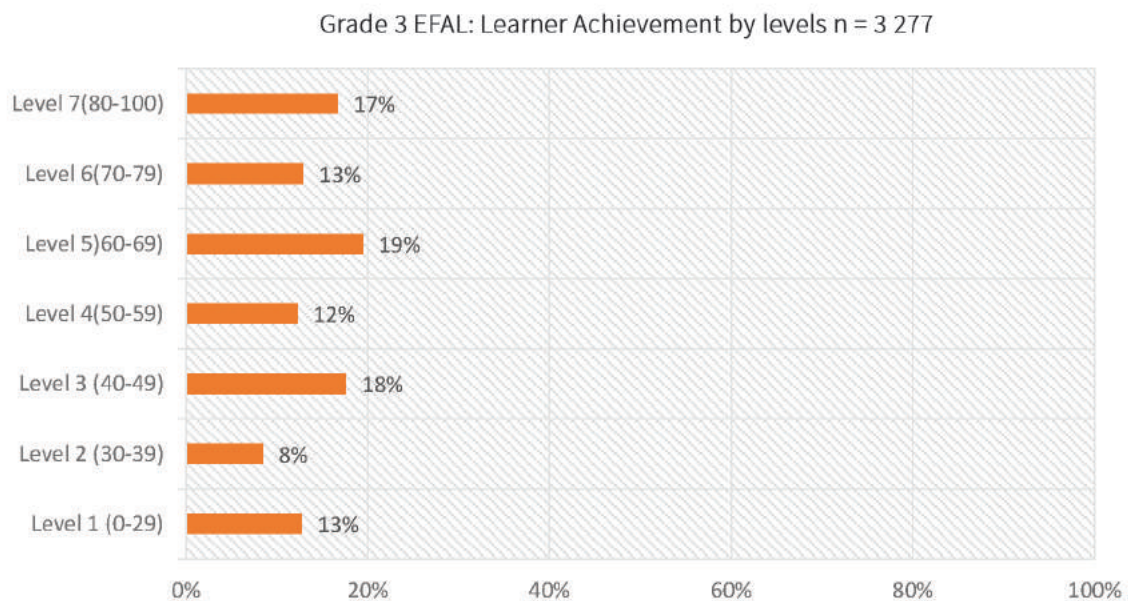
Tracking in the Second Level Scale Up: Provincialisation

Provincialisation entails the scale-up of the District improvement Programme to all schools and districts in the province. Provincialisation is currently underway in Eastern Cape, KwaZulu-Natal and Limpopo. Materials are provided by the NECT and teacher training and support is provided by Subject Advisors. In the Eastern Cape, the following M&E activities have been carried out:

- a baseline study was conducted in September/October 2017 in 257 schools in the 10 remaining districts where the programme is being extended into.
- 74 Subject Advisors (Foundation Phase and Intermediate Phase mathematics and EFAL) were trained and supported to collect data, and
- Selected Grade 3 and 4 learners completed assessment tasks.

The figure below reflects overall EFAL assessment outcomes from a sample of 3 277 Grade 3 learners in the Eastern Cape.

Grade 3 EFAL Overall Assessment Results



A baseline study is being planned for Limpopo in Term 3 of 2018 and in Term 4 for KwaZulu-Natal. All baseline studies are based on work completed by learners by end of Term 2 in the current year.



Evaluation of the Primary School Reading Improvement Programme (2016-2017)

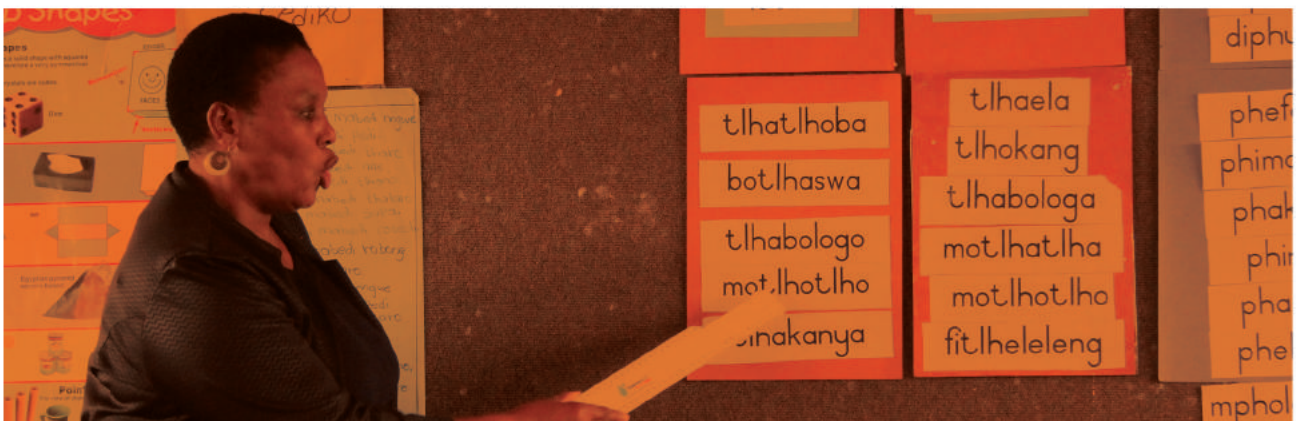
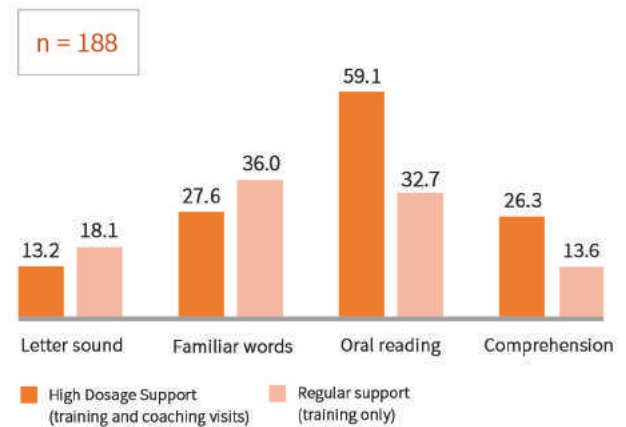
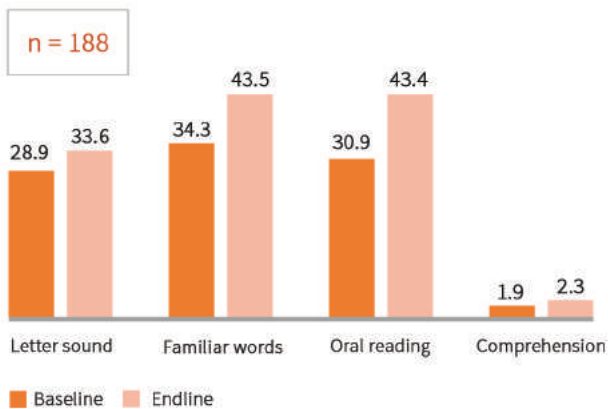
The Primary School Reading Improvement Programme (PSRIP) was developed in collaboration with the DBE and the ETDP SETA as a solution that would strengthen foundational reading and literacy skills in grade 1-3 classrooms in 1670 schools across the country. Pre and post assessments were conducted after a period of 6-8 months of interventions.

- Number of Foundation Phase EFAL Subject Advisors reached: 263
- Number of districts reached: 51
- Number of Foundation Phase teachers reached: 11,678 Foundation Phase teachers
- Number of learners reached: over 500,000 learners

The programme showed some notable changes in reading outcomes:

- All learners in the sample scored higher marks in the endline assessment for all four sub-tasks of EGRA. This means that learners in the PSRIP schools showed bigger improvements than those in control schools
- PSRIP high dosage support for EFAL teachers improved the reading skills of learners in high order skills (oral reading and comprehension)

Change in learner competencies



OPR School Survey - 2016

An Output to Purpose Review (OPR) was conducted in 2016, with a focus on the District Improvement Programme. The OPR was conducted to establish progress made by the NECT towards achieving its objectives and goals. Data was collected from a total of 1,718 individuals who are participating, in one capacity or another, in the NECT programme across all 8 of the districts. The review confirmed that:

- Most participants are in general agreement that the NECT DIP programme is being delivered and used at their schools;
- The majority of the participants are positive about the outcomes it has achieved in their schools (Refer to the table see below);
- Curriculum trackers are a useful support to managing the delivery of the curriculum;
- The NECT's approach to curriculum coverage monitoring was appropriate and that increased attention to time on task was necessary.

Table 3: Overall assessment, variables by whole sample (% of all responses)

	N	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
NECT deals with the correct subjects	553	2	5	1	42	51
Teacher content knowledge improved	553	1	2	1	50	46
Teacher pedagogical skills improved	553	1	3	3	57	37
Teacher morale and work ethic improved	553	1	4	1	54	39
Managerial capacity of principal improved	547	2	4	3	48	43
Managerial capacity of SMT improved	546	1	5	5	55	35
Instructional leadership of principal better	542	2	4	3	49	41
Instructional leadership of HOD better	476	2	4	5	49	40
NECT coaches visit regularly	552	6	16	2	37	39
District officials more active in the school	552	13	20	4	44	20
Benefit from trackers & other materials	552	1	3	1	43	52

The OPR also highlighted important aspects of programme design and delivery which needed refining as the programme progressed towards full scale up in 2017



Foundation Phase External Evaluation

In February - March 2017, an evaluation of the NECT's Learning Programmes was initiated in collaboration with Zenex Foundation to measure the literacy and numeracy outcomes of Grade 1 learners between treatment districts (Bojanala, Mt Frere and King Cetshwayo), that have benefited from the Learning Programme, and comparison districts (Dr Kenneth Kaunda, Mbizana and Ilembe). This baseline stage of the evaluation provided more understanding of the implementation of the NECT Learning Programme and its emerging impact in the treatment districts. Baseline findings highlighted that:

Where the whole district was the focus of the programme (KwaZulu-Natal districts)

- There are high levels of optimism about the programme, but (thus far) lack of reported improvement in learner results
- Integration and buy-in by the district to the programme was high
- Coaches appear fundamental to the model; particularly in terms of advocacy and support.

Where specific schools were the focus of the programme (Fresh Start Schools)

- There was a high level of engagement from Fresh Start Schools
- School planning was reported to have significantly improved due to coaches
- School Management Teams (SMTs) were taking far greater interest in and responsibility for curriculum coverage – including more regular meetings.

The evaluation will be completed by the end of 2018.

Future Plans for M&E

Going forward work will be done in the following areas:

- Completion of the external review of Learning Programmes in the Foundation Phase
- Annual reports on curriculum coverage and progress towards NECT programme goals
- Periodic Output to Performance Reviews (programme level)
- Continuous monitoring of programme management and implementation
- Monitoring of District Profiling and Management programme -Fundamentals of Performance (FoP)
- Testing new innovations such as FET level Learning Programmes, Digital Learning Programmes and other pilot projects
- Evaluation of the new national Mathematics Framework





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