

## CASE STUDIES FROM SOUTH AFRICA

### Math Labs in Free State Province of South Africa

Many African nations today continue to grapple with finding the right solution to the challenges in the path of sustainable development, which is not only inclusive, socially cohesive and builds national character but also alleviates poverty, promotes economic prosperity and brings the nation on the world platform. Distilling the 'right' solution for a nation calls for a sound policy and political environment, capacity building of its people and institutions, alliance with a strong development advisor and partner, and of course, a well thought out vision.

**South Africa** has been taking huge strides towards sustainable development and nation building in the last two decades. The fact that the nation is highly focused on achieving its development targets is substantiated by **South Africa's National Development Plan - Vision for 2030**, released in November 2011. The Plan, charts the way forward for the feisty nation through elimination of poverty and reduction of inequality. At its core, lies building capabilities of and creating opportunities for the South African people and institutions. A capabilities approach to development is critical to broaden opportunities, which in turn is an essential element of the nation-building process. An 'inclusive capabilities' approach has been adopted as its implementation strategy; the Plan is poised to achieve the targets for *Education, Training and Innovation* within the set timeframe of year 2030. Some of the more critical targets include enabling about 80% of schools and learners to achieve 50% and above in literacy, mathematics and science in grades 3, 6, 9, ensure at least 80% of children complete 12 years of schooling, increasing higher education participation from 17% to 30%, increasing total employment to 24 million, and setting up an efficient and stronger Information Communications Technology (ICT) infrastructure.

### **Key Challenges Today**

The Plan recognizes multiple challenges to be overcome in the Vision fulfillment, of which the *two most critical, high priority and interrelated areas of concern* have been identified as

- unemployment and
- the quality of education.

Since creating jobs and livelihood opportunities, improving the quality of education and training are not only imperative for achieving social cohesion and well-being but also economic growth, the nation's dedicated focus on its youth and children becomes imperative too. The South African children and youth of today are the "real" participants riding at the helm of the nation's tomorrow.

- To address the challenge of *unemployment*, the Plan intends to *create 11 million jobs* through strategies such as realizing an environment for sustainable employment, inclusive economic growth and promoting employment in labor-absorbing industries.
- To address the challenge of *poor education quality*, the Plan aims for
  - early childhood education access rates exceeding 90% percent;
  - quality school education, with globally competitive literacy and numeracy standards;
  - expanding higher education and training sector that fulfills the inherent potential which contributes towards rising incomes;
  - higher productivity and the shift to a more knowledge-intensive economy;

- and a wider system of innovation that links key public institutions (universities and science councils) with South Africa's economic priorities.

The sections of society that would be touched by the above include

- children - in and out of school,
- school teachers,
- youth - school dropouts/low scorers,
- existing youth in colleges, universities and tertiary institutes,
- out of work youth and older graduates

Given the current environment, replete with challenges on the one hand and the changes envisioned through the Plan on the other, the government of South Africa required a development partner who has the requisite ability and experience to not just advise and guide but also to innovate, implement and deliver.

### **NIIT's School Solutions**

To cater to the IT and IT enabled learning requirements of School children; NIIT provides complete IT integration programs for Schools both in the Government as well as the Private sector.

NIIT has partnered with the various State Governments as well as with over 1400 private Schools across India, thereby making learning a pleasure for over a million students across over 9,500 schools.

NIIT has understood the importance of IT and IT enabled learning and is endeavoring to help Schools enhance the effectiveness of education. This has formed the basis of the NIIT eguru program, a movement that has revolutionized classroom teaching and learning, and taken technology to the grass-root level. These programs for Schools have been conceived and developed with a view to provide both "Computer Education" and "Computer Aided Education", delivered on a turnkey basis.

The Department of Education (DOE) of Free State province awarded a contract to Eagle Brothers for establishment and management of Math Labs in the Free State Province and Eagle Brothers further outsourced the contract to NIIT.

Both companies were satisfied that there is sufficient value derived from the association to continue the relationship, and signed first contract with Department of Education, Free State on **1<sup>st</sup> Aug'2011** to establish **200 Math Labs** in Primary & Intermediate schools across Free State.

Basis the success of Phase 1, the project was further extended for another 300 Schools in 2012 (Phase 2). However the department has allotted only **250 Schools** till date. In the journey so far we have touched **335 schools in Free State province** and imparted training to **4000 educators** on NIIT unique methodology of teaching math and also touched **400,000 young learners** and touching more with the following stated objectives:

- Improvement in learner's academic performance, thereby boosting morale
- Building of numeracy skills, analytical thinking and love for learning in children

- Decrease in school absenteeism and drop-out rates
- Teacher enablement in new teaching learning systems

#### Monitoring and Evaluation – Impact Study in Free State

NIIT conducted reinforcement sessions with educators and Mental Math Genius Tests for learners in 45 schools to assess the intervention of ICT enabled Math Lab. NIIT covered 1000 educators and 5000 learners in this study.

In 2013 Annual National Assessment Examinations, Free State Province stood first in Math Academic Performance out of all nine Provinces of South Africa.

Photo Gallery of Free State

First Math Lab in South Africa was Launched on 27<sup>th</sup> Jan 2012 by Premier Mr Ace Magashule and presided over by the Minister of Education of Free State Mr M Taite and the other dignitaries in Theha Setjhaba Primary School Sasolburg.

This was telecasted live on national news- morning live.



Testimonials from Free State



**TWEELING**

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HOËRSKOOL  
HIGH SCHOOL

Pretorius P.O. Box 54  
Tweeling 5820

8 October 2012

TO WHOM IT MAY CONCERN

**LETTER OF APPRECIATION**

We want to thank the Math Lab Team with their excellent methods of training our educators. This will ensure improving our results and giving us the opportunity to provide the school with better results.

The training really made the teachers very positive and motivated to make sufficient use of the Maths lab.

Regards

IS Bam  
Principal



REAITUMELA INTERMEDIATE SCHOOL  
P.O. BOX 5083  
P.O. LENGAU  
9503  
TEL/FAX: 056 214 161  
30 NOVEMBER 2010

TO WHOM IT MAY CONCERN

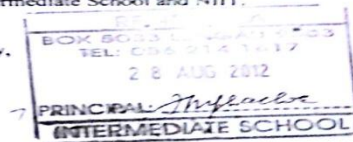
**RE: LETTER OF APPRECIATION**

**Date: 28/8/2012**

THE REAITUMELA INTERMEDIATE SCHOOL, KROONSTAD, hereby write to express appreciation for motivating the math educators including other master educators from various schools in Kroonstad. The event titled " Mental Math Genius " that was held in our school with the objective of increasing strength in the math department and providing the measures for effective and efficient utilization of math lab .

We sincerely thank, NIIT team specially Bharat Jaini alias BJ and Ajay Chauhan alias AJ for providing excellent support whenever required and to conduct this activity. We are looking forward for more such motivational activities and appreciate the relationship between Reaitumela Intermediate School and NIIT.

Yours Sincerely,



Participating Schools: LIKUBU PRIMARY SCHOOL  
DORRINGTON MATSEPE PRIMARY SCHOOL  
PHOMOLONG PRIMARY SCHOOL  
MAOKENG PRIMARY SCHOOL  
THAROLLO PRIMARY SCHOOL  
BOIKEMISETSO PRIMARY SCHOOL

# ISAAC MHLAMBI PRIMARY SCHOOL

Ref. No. 43611156  
Enquiries: N.P. Khumalo



P.O. BOX 1874  
SASOLBURG  
1947

Date: 27/07/2012

TO WHOM IT MAY CONCERN

RE: LETTER OF APPRECIATION

The management of the school mentioned above hereby write to express appreciation for the beginning of the ongoing refresher training that NIIT did for the Maths teachers and the test provided to learners in Gr. 4-7 for performance analysis in Maths.

The event titled "Mental Maths Genius" that was held in our school with the objectives of discussing ICT in Education and the concern areas of teachers using MathsLab in an efficient and effective manner.

We, sincerely thank NIIT team for the initiative taken to assist in improving the optimum utilization of MathsLab. We would like to see NIIT coming up with more such initiatives in the near future.

We appreciate the relationship between Isaac Mhlambi P.S and NIIT.

Yours sincerely

  
Deputy Principal: E.M. Sefudi

ISAAC MHLAMBI PRIMARY SCHOOL  
P.O. BOX 1874  
SASOLBURG, 1947  
TEL/FAX: 016 974-3333

2012 -07- 27

FEZILE DABI EDUCATION DISTRICT  
PRINCIPAL: MRS N.P. KHUMALO

SIGNATURE: 

### **Math Lab in Eastern Cape – Pilot Project**

NIIT launched Math Lab in Nxuba SP school, Cradok, Eastern Cape to serve under privileged community and the lab was duly inaugurated by HOD Mr. **E.G. KLAASEN** on 22<sup>nd</sup> May 2012 with other dignitaries.

### **Math Lab in Kwa Zulu Natal – Pilot Project**

NIIT established two Math Labs in Kwa Zulu Natal Province and formally inaugurated by **Mr. Senzo Mchunu**, MEC Deptt. of Education KZN along with wives of **Zulu king Your Majesty Goodwill Zwelithini** and other officials.







## Math Lab in Gauteng – Pilot Project

NIIT established a Math lab in Gauteng Province in Khayelihle Primary School formally inaugurated by Mr. Envy Surty, Deputy Minister, Department of Basic Education on 9<sup>th</sup> October 2013.



SATURDAY WEEKEND ARGUS, Workplace  
19 Oct 2013, p.3

# Laboratory aims to improve maths at Gauteng school

NEOTEL and NIIT this week launched an ICT-enabled maths (information and communications technology) laboratory at Khayelihle Primary School in Vosloorus, Ekurhuleni, as a means of contributing towards improving maths skills at primary schools.

The Math Lab – believed to be the first of its kind in Gauteng – was officially opened by Deputy Minister of Basic Education Mohamed Enver Surty.

The state-of-the-art laboratory will enable primary school students

to learn and explore mathematical concepts and verify mathematical facts and theorems using practical technology.

“We are very excited about the launch of our first Math Lab in Gauteng. This lab will help learners to improve their academic performance, and build numeracy skills and analytical thinking,” says Sunil Joshi, chief executive and managing director of Neotel. “There is a huge maths and science skills gap in schools across South Africa, and corporates need to start

working together with the government to deploy similar initiatives that will ensure a brighter future for our children.”

Since 2011, NIIT has provided more than 350 schools across the country with ICT-enabled maths labs. Neotel and NIIT recently announced the formation of a joint alliance – the N2 Education Hub – to build on that solid foundation through Neotel’s network.

“This is truly an exciting time for our school. The Math Lab will play a huge role in helping our

learners improve their numeracy skills and understanding of numbers,” says Willie Mohlabai, principal at Khayelihle. “Mathematics is one of the subjects that most learners struggle with from primary to secondary school. It is essential for our students to acquire an interest in and understanding of this subject at a young age.”

The Math Lab helps learners understand, internalise, discover and verify basic mathematical and geometrical concepts through concrete objects and situations,

building interest and confidence.

Neotel’s Joshi explains that the ICT-enabled lab uses a unique methodology which teaches the learners to reason, connect ideas and think logically.

Khayelihle Primary School will be presented with multiple teaching and learning aids comprising technology applications, videos, manipulative measuring instruments, tables and charts. The teachers will also be provided training.

For more information, visit [www.neotel.co.za](http://www.neotel.co.za)