



# Mathematics, Science and English High Schools Project

## 1. The Project

The Mathematics, Science and English High Schools Project is a five-year intervention implemented in five districts across three provinces: Metropolitan North and Metropolitan East Districts in Western Cape; Port Elizabeth and Uitenhage Districts in Eastern Cape and iLembe District in KwaZulu-Natal. Through the multi-provincial roll out, insights and lessons will be gained in different geographical contexts.

The Project is an innovative intervention aimed at increasing participation rates and performance in Mathematics, Science and English in high school learners, while simultaneously equipping them with the technological skills required in the 21<sup>st</sup> century. The Project will support school leaders; teachers, as well learners through blending of 'face-to-face' learning and teaching support methods with the use of modern technology.

## 2. The Aim

The Project aims to increase the number of high functioning schools that offer quality Mathematics, Science and English teaching and consequently increase quality of performance. This will be realised by increasing the:

- Participation rates in Mathematics and Science;
- Bachelor pass rates with Mathematics and Science subjects, and
- Quality of passes in Mathematics, Science and English in the National Senior Certificate.

## 3. The problems addressed

South Africa is plagued by a scarcity of skills in the STEM (Science, Technology, Engineering, and Mathematics) fields. South Africa's poor participation rates and poor performance in Mathematics and Science, affects the pipeline of learners accessing tertiary education in careers requiring these subjects. Of particular concern is the number of learners from disadvantaged backgrounds who achieve the level of passes required for Mathematics and Science related study areas. This in turn has a negative impact on the economic growth, transformation and development in the country.

Among the reasons for the low participation rates and poor quality of performance are:

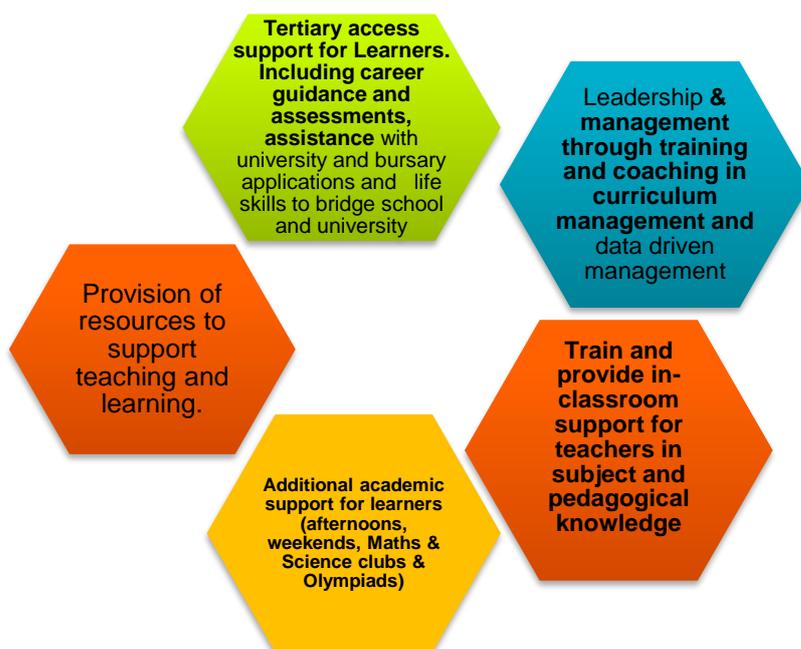
- Perceptions by learners and parents that Mathematics and Science are difficult subjects;
- Second and third language English learners, may have a poor grasp of the language of instruction (in most instances, English), resulting in difficulty with understanding Mathematics and Science concepts;
- Learners enter high school with accumulated learning backlogs which must be addressed to enable them to access appropriate grade curriculum content, and
- Teachers need subject content and pedagogical training to diagnose and address backlogs, teach problem-solving and develop learners' conceptual thinking skills.

#### 4. The Intervention Approach

The Project adopts the school as the system for change and will work at five levels:

- The first involves **training and mentoring school managers**;
- The second involves subject content and pedagogical training and in classroom **support to Mathematics, Science and English teachers**;
- The third involves working **directly with learners** to provide additional academic support;
- The fourth involves **tertiary access support to learners** through career assessments and guidance to guide learners in their study choices. Learners will receive assistance with university and bursary applications and life skills to bridge school and university study;
- The fifth involves the provision of **resources** for support teaching and learning.

Partnerships are key to the Zenex Foundation's work and this Project involves adopting partnerships at a number of levels, pivotal to its success. To this end, the Foundation is in partnership with well established, experienced education organisations to implement the project to deliver an integrated model of support in their respective areas of specialisation. The Foundation has established close working relationships with the Districts who provide much needed guidance and support for the Project. The District offices have played a leading role in securing buy-in from schools. The partnership with the Districts is critical to enhance chances of success and sustainability of the Project.



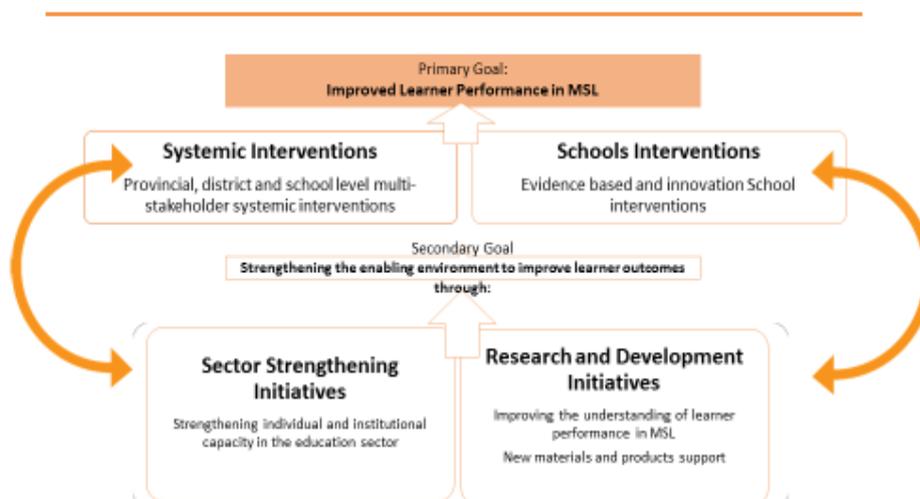
## 5. Schools and Implementing Partners

The Project is rolled out in five districts across three provinces. The Zenex Foundation with a consortium of partners will deliver the interventions in each province.

District	Schools	Implementing Partners
<b>Province: Western Cape</b>		
Metropole East District	<ol style="list-style-type: none"> <li>1. Iqhayiya Secondary School</li> <li>2. KwaMfundo High School</li> <li>3. Luhlaza High School</li> <li>4. Manyano High School</li> <li>5. Masiyile High school</li> </ol>	<ul style="list-style-type: none"> <li>○ University of Cape Town Schools Development Unit</li> <li>○ Tsebo Education Network (TEN).</li> <li>○ Siyavula Trust:</li> <li>○ Kevin Wildschut: Project Manager.</li> </ul>
Metropole North District	<ol style="list-style-type: none"> <li>1. Bardale High School</li> <li>2. Manzomthombo High School</li> <li>3. Mfuleni Secondary School</li> <li>4. Ravensmead Secondary School</li> <li>5. Sinenjongo High School</li> </ol>	
<b>Province: Eastern Cape</b>		
Port Elizabeth District	<ol style="list-style-type: none"> <li>1. Bethelsdorp High School</li> <li>2. Cowan High School</li> <li>3. Chapman High School</li> <li>4. Ethembeni Enrichment Centre</li> <li>5. Kwamagxaki High School</li> <li>6. Masiphatisane High School</li> <li>7. Motherwell High School</li> </ol>	<ul style="list-style-type: none"> <li>○ Nelson Mandela Metropolitan University: Govan Mbeki Mathematics Development Unit:</li> <li>○ Partners for Possibility</li> <li>○ New Leaders Foundation (NLF)</li> <li>○ Tsebo Education Network (TEN):</li> <li>○ Angela Schaffer: English support</li> <li>○ Wendy Heard: Project Manager</li> </ul>
Uitenhage District	<ol style="list-style-type: none"> <li>1. Molly Blackburn High School</li> <li>2. Newtown Technical High School</li> <li>3. Westville High School</li> </ol>	
<b>Province: KwaZulu-Natal</b>		
iLembe District	<ol style="list-style-type: none"> <li>1. Banguni High School</li> <li>2. KwaNgoza High School</li> <li>3. Nqakathela High School</li> <li>4. Our Lady of the Rosary</li> <li>5. Sisebenzile High School</li> <li>6. Ukukhanyakwezwe High School</li> </ol>	<ul style="list-style-type: none"> <li>○ Centre for the Advancement of Science and Mathematics Education (CASME)</li> <li>○ Environment and Language Education Trust (ELET)</li> <li>○ New Leaders Foundation (NLF)</li> <li>○ Tsebo Education Network (TEN)</li> <li>○ Tom Sokhela: Project Manager.</li> </ul>

## 6. Zenex Foundation Programme Areas

The Mathematics, Science and English High Schools Project falls within the Schools Programme of the Zenex Foundation.



## 7. The Zenex Foundation

The Zenex Foundation is an independent specialist grant-making agency working in Mathematics, Science and language education in South Africa. The aim of the Zenex Foundation is to improve the quality of learning and teaching, and to positively contribute to the education sector through research and project interventions. Evidence derived from our work in Research and Evaluation underpins and informs all project work and also contributes to knowledge development in the education sector. The Foundation values innovation and highly prizes its partnership with government, donors and service providers.

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