

REPORT ON THE TAKING LEGISLATURE TO THE PEOPLE (TLP) OVERSIGHT VISIT OF THE PORTFOLIO COMMITTEE ON EDUCATION; CULTURE, SPORT AND RECREATION TO THE OR TAMBO MATHEMATICS, SCIENCE AND TECHNOLOGY ACADEMY (MSTA) IN EMALAHLENI LOCAL MUNICIPALITY, NKANGALA DISTRICT, 13 MARCH 2018 – DEPARTMENT OF EDUCATION

1. INTRODUCTION

The Mpumalanga Provincial Legislature conducted the Taking Legislature to the People (TLP) event at eMalahleni Local Municipality from 12 – 16 March 2018.

The Portfolio Committee on Education; Culture, Sport and Recreation (the Committee) has a mandate in terms of Rule 119 of the Rules and Orders of Mpumalanga Provincial Legislature to hold the Department of Education (the Department) accountable through various oversight mechanisms during the course of a financial year, one of them being oversight visits to projects of the Department. Two provincial outcomes under the Department's mandate are Outcome 1 (to provide quality basic education) and Outcome 5 (a skilled and capable workforce to support an inclusive growth path). To this effect, the Committee visited the OR Tambo Mathematics, Science and Technology Academy (MSTA) situated in eMalahleni.

Section 118 (1) (a) and (b) (i) of the Constitution of the Republic of South Africa empowers a provincial legislature to facilitate public access to and involvement in its oversight processes. To this effect, a Joint Social and Economic Transformation Cluster Public Hearing was held for community members in eMalahleni Local Municipality to raise service delivery concerns.

2. METHOD OF WORK

In preparation for the TLP visit, the Research Unit conducted preliminary visits to projects of the Department in eMalahleni Local Municipality (the Municipality) and identified projects to be visited by the Committee. The approved TLP Social Cluster oversight visit programme was circulated to the Committee and sent to all stakeholders, together with the relevant invitations to participate in the TLP programme. As part of the overall TLP preparations, the Legislature briefed the Municipality on the TLP programme, for all structures to participate in various activities of the Portfolio Committees.

Subsequently the Committee met on 18 April 2018 to consider its draft TLP report. The House resolutions emanating from this report were referred to the Department for implementation and report back to the Legislature.

Invited stakeholders included the Department and the Mpumalanga Regional Training Trust (MRTT), the Municipality (Office of the Executive Mayor, Office of the Speaker, Municipal Manager and all councillors); the Department of Public Works, Roads and Transport (DPWRT); Provincial Treasury; Office of the Auditor-General SA, Office of the Public Service Commission; South African Local Government Association; House of Traditional Leaders; South 32, Department of Science and Technology, UNISA, Siyavula Project, learners and educators from Witbank High School; the Management and staff of the MSTA.

3. PURPOSE OF THE OVERSIGHT VISIT

The purpose of the TLP oversight visit to the OR Tambo MSTA (the MSTA) on 13 March 2018 was to assess progress made towards the provision of quality basic education at this state of the art facility and to observe its functionality.

4. OBSERVATIONS

The oversight visit commenced with a briefing session at the MSTA. The Head of Education, Ms M Mhlabane welcomed the Committee to the MSTA and handed over to the Chief Director Mr Mkhwanazi to provide a brief overview of the Department's role in the MSTA. Thereafter the Director of the MSTA, Mrs Ndinisa made an informative presentation to the Committee on the background, facilities and services of the MSTA.

Thereafter the Committee interacted with the MSTA management, the Department, South 32 as the sponsor of the MSTA building, as well as some of the learners from Witbank High School who are beneficiaries of the MSTA broadcast services. After the deliberations, the Committee conducted an in loco inspection of the MSTA.

(a) Background on the MSTA

During the presentation and interactions, the Committee noted the following on the MSTA:

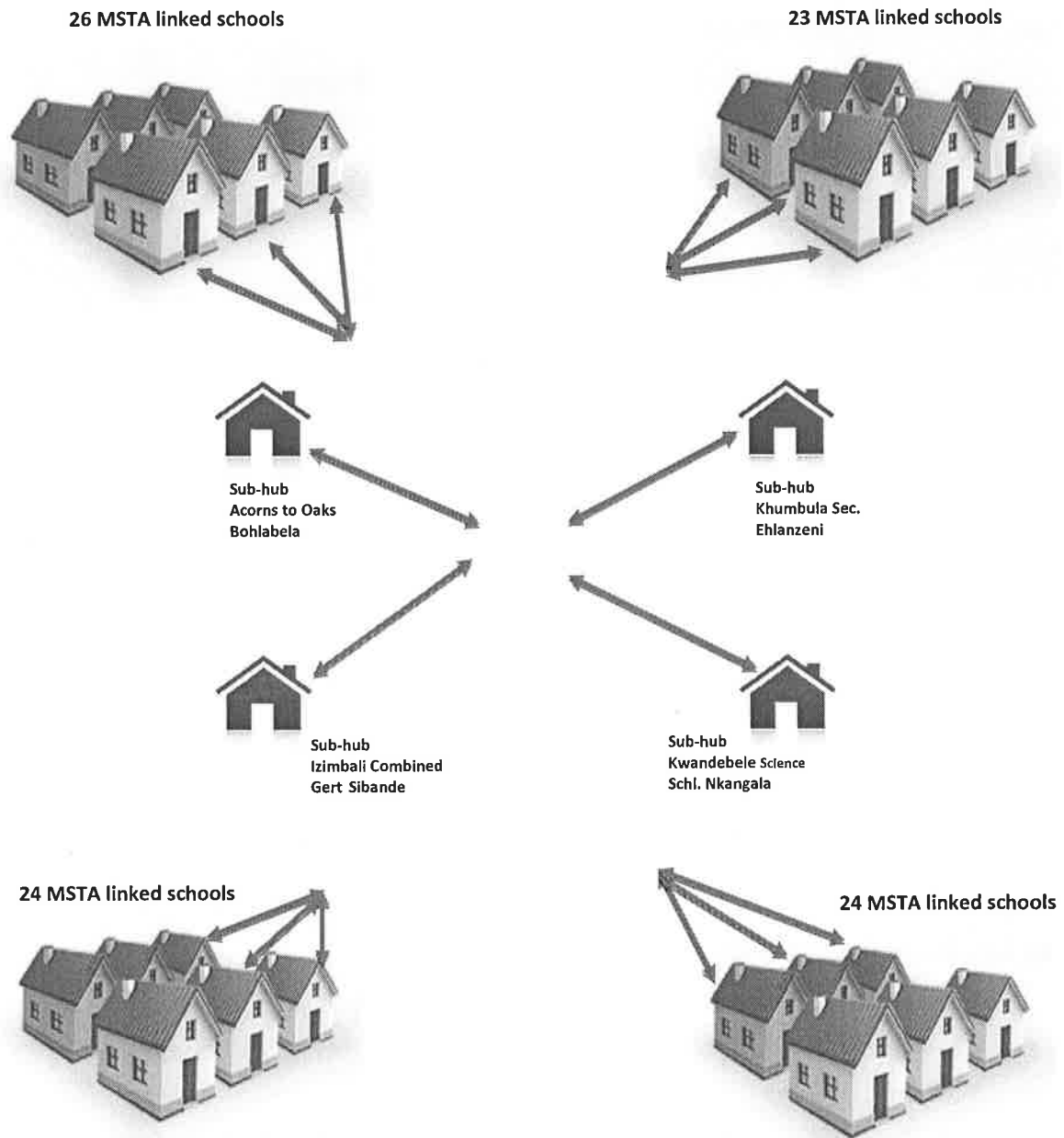
- The MSTA was officially launched on 03 October 2017 and the building was further re-named as OR Tambo MST Academy on 27 October 2017 as part of the centenary celebrations in honour of the late struggle icon, Mr. Oliver Reginald Tambo.

- The implementation of the MST Academy concept began in 2014 with the Grade 8 learners, who are currently in Grade 12. Thus the impact of the implementation of the MSTA concept in mathematics and science learner performance will be realized in the Grade 12 class of 2018.
- South32 (former BHP Billiton) donated a centre in eMalahleni which serves as the Maths, Science and Academy **Main Hub**, with the following:
 - Fully furnished offices
 - 4 x boardrooms
 - 2 x lecture halls
 - 1 x broadcast studio
 - 6 laboratories (Physics, Chemistry, Maths, Technology, Computer laboratory and Media Centre/Library)
- 101 secondary schools were identified and linked to the MST Academy main-hub
- One (1) satellite school in each district was identified as a **sub-hub** which is linked to a minimum of 24 schools within the district
- To ensure that support is given to learners before entering secondary school, each of the 101 secondary schools identified their **feeder schools** which totaled 492 schools across the Province.
- ICT resources were provided to the secondary schools as well as to the feeder primary schools to promote e-learning, to enhance and integrate ICT into teaching and learning.

The Academy was established to:

- Increase the number of learners taking MST subjects
- Pass ALL learners at 50% and above (quality passes) in Mathematics and Physical Science
- Train teachers on content knowledge(CK), Technological Content Knowledge (TCK) and pedagogical content knowledge (PCK)
- Enhance and develop teachers' competency in the teaching of MST subjects to be able to teach the subjects effectively.
- Develop strategies that will enhance learner performance within the Mpumalanga Province in particular and the entire community in South Africa in general.

STRUCTURE OF THE MSTA AND SUB-HUBS



(b) Rationale for the Mathematics, Science and Technology Academy (MSTA)

- The availability of a pool of young citizenry with sound mathematical and scientific knowledge at secondary school level is considered to be a prerequisite for further skills development in providing an efficient workforce to increase productivity and pioneer entrepreneurship leading to economic development and alleviation of poverty

- Research in science education attributes the following key factors instrumental in causing this migration to the MSTA approach:
 - Inadequate development of understanding of fundamental concepts in mathematics and science in the developmental stages of education, leading to fear of success in the subjects.
 - Inadequate capacity of teachers to develop conceptual knowledge using sound pedagogical and problem solving techniques to instill a love for these subjects.
 - Insufficient facilities available in majority of schools limit access to technology to teach the subjects innovatively to develop conceptual understanding.

- The MSTA was established to intervene effectively in selected schools to:
 - Alleviate the causal factors cited above which hamper learner attainment;
 - To serve as an incubator for learners to pass Mathematics and Science in large numbers; and
 - To pursue appropriate studies in institutions of higher education.

District	Number of MSTA schools	Sub Hub	Number of feeder schools
Bohlabela	27	Acorn-Oaks Primary	133
Ehlanzeni	24	Khumbula Secondary	131
Gert Sibande	25	Izimbali Boarding	111
Nkangala	25	KwaNdebele Science	117
Total	101		492



Above is the MSTA main hub situated in eMalahleni



The former MEC for Education and the former Chairperson of the Portfolio Committee with the Director of the MSTA at the official launch of the MSTA on 03 October 2017

(c) Functions of the Main Hub

- The headquarters or main hub is situated in eMalahleni. It offers in-service training to mathematics, science and technology teachers to upgrade their pedagogical content knowledge, track, monitor and report on the implementation of acquired skills in classroom practice
- It creates an environment for sharing among schools through interactive live broadcast of lessons and stored resources
- Upgrades academic and professional qualifications of teachers in partnership with higher education institutions
- Conducts research studies investigating or informing curriculum decisions making

Maintenance

During the oversight visit at the MSTA, it was noted that the ceilings had been damaged by rain water entering through the roofing; the maintenance staff cleared up the leakage but it was noted that this was situation needed to be effectively addressed so that the world-class facility could continue providing the educational service it was established for.

(d) Sub-Hubs

The sub-hubs function as follows:

- To enroll MST learners only, from grade 8-12
- To be responsible for 24 MSTA linked schools in a district
- To track, monitor and report on classroom practice and learner performance periodically
- To manage **teaching and learning** (learning programmes, lesson plans, assessment, moderation, examination, so that big numbers of learners with a good pass in mathematics and science are produced and sustainable.
- To intervene and support on a day to day basis, in the district academy schools by providing lesson plans, assessment items, and interactive media resources to impact classroom practices and improve learner performance
- Subject lead teachers for Mathematics, Natural/Physical Sciences, Accounting and Life Sciences have been appointed to support teachers from the district academy linked schools

Sub-Hub Lead Teachers

- All identified lead teachers were trained on their roles and responsibilities.
- The lead teachers are responsible for:
- Training and supporting teachers from MSTA linked schools on CK, TCK and PCK
- Training teachers on e-resources to enforce integration of e-learning into teaching and learning
- Conducting lesson broadcast to the 24 linked schools
- Developing lesson plans and assessment items
- Conducting results/item analysis
- Co-ordinate lesson study and Saturday classes
- Record keeping and filing system
- Conduct resource auditing (human and physical resources) in MSTA linked schools
- Set standard for quality performance

(e) Support for Effective Teaching and Learning

- Monitoring and support by subject advisors
- Subject advisors are responsible for all provincial schools, including MSTA schools
- Subject advisors will support the lead teachers in their preparations for meetings with subject teachers
- Understanding of difficult content and avail good lesson plans
- Assist with teaching aids, notes, guides
- Assist with improvisations for a variety of equipment
- Conduct difficult experiments
- Track curriculum coverage
- Can be present on the meeting days

(f) Progress Report on Resourcing of the four (4) Sub-Hubs

KHUMBULA SUB-HUB (LABORATORIES)

PLANNED ACTIVITY	ACCOMPLISHED	STILL TO DO
<ul style="list-style-type: none"> • Construction/Refurbish-ment of laboratories: - 3 x Physics - 3 x Chemistry - 3 x Life Sciences - 1 x Mathematics - 3 x Computer centres - 1 x Technology Centre - 1 x Media centre 	<ul style="list-style-type: none"> • Refurbishment of laboratories - 1 x Mathematics - 1 x Computer centre • Construction of laboratories - 1 x Physics - 1 x Chemistry - 1 x Life Sciences - 1 x Technology 	<ul style="list-style-type: none"> • Construction of laboratories - 2 x Physics - 2 x Chemistry - 2 x Life Sciences - 2 x Computer Centres - 1 x Media centre

ACORN TO OAKS SUB-HUB (LABORATORIES)

PLANNED ACTIVITY	ACCOMPLISHED	STILL TO DO
<ul style="list-style-type: none"> • Construction of laboratories: - 3 x Physics - 3 x Chemistry - 3 x Life Sciences - 1 x Mathematics - 3 x Computer centres - 1 x Technology Centre - 1 x Media centre 	<ul style="list-style-type: none"> • Construction of laboratories - 1 x Physics - 1 x Media centre - 1 x Computer centre 	<ul style="list-style-type: none"> • Building of laboratories - 2 x Physics - 3 x Chemistry - 3 x Life Sciences - 1 x Mathematics - 1 x Technology - 2 x Computer Centres

KWA-NDEBELE SCIENCE SCHOOL SUB-HUB (LABORATORIES)

PLANNED ACTIVITY	ACCOMPLISHED	STILL TO DO
<ul style="list-style-type: none"> • Construction/Refurbishment of laboratories: - 3 x Physics - 3 x Chemistry - 3 x Life Sciences - 1 x Mathematics - 3 x Computer centres - 1 x Technology Centre - 1 x Media centre 	<ul style="list-style-type: none"> • Refurbishment of laboratories - 1 x Physics - 1 x Chemistry - 1 x Life Sciences - 1 x Mathematics - 1 x Technology - 1 x Media centre 	<ul style="list-style-type: none"> • Construction of laboratories - 2 x Physics - 2 x Chemistry - 2 x Life Sciences - 3 x Computer Centres

IZIMBALI BOARDING SCHOOL (LABORATORIES)

PLANNED ACTIVITY	ACCOMPLISHED	STILL TO DO
<ul style="list-style-type: none"> • Construction of laboratories: - 3 x Physics - 3 x Chemistry - 3 x Life Sciences - 1 x Mathematics - 3 x Computer centres - 1 x Technology Centre - 1 x Media centre 	<ul style="list-style-type: none"> • Construction of laboratories - 1 x Chemistry - 1 x Media centre - 1 x Computer centre 	<ul style="list-style-type: none"> • Construction of laboratories - 3 x Physics - 2 x Chemistry - 3 x Life Sciences - 1 x Mathematics - 1 x Technology - 2 x Computer Centres

(g) Staffing at the MSTA

It was noted that the MSTA is managed by a team comprising five (5) staff members as follows:

- 1 x Director
- 1 x Deputy Director responsible for Research
- 1 x Chief Education Specialist responsible for Technology
- 1 x Chief Education Specialist responsible for Mathematics and
- 1 x vacant Chief Education Specialist for Physical Science

The one (1) vacancy for a Chief Education Specialist Physical Science was noted by the Committee.

5. FINDINGS

The Committee made the following findings after the visit to the OR Tambo MSTA:

- 5.1. The Department's partnership with key private sector partners in the establishment and operationalization of the OR Tambo Maths, Science and Technology Academy (MSTA) as a world class facility in the Province is commended.
- 5.2. There is a vacancy of a Deputy Chief Education Specialist for Physical Science at the MSTA.
- 5.3. The four (4) sub-hubs of the MSTA are in the process of being refurbished and resourced.

6. RECOMMENDATIONS

Based on the findings above, the Committee recommended that the Department must implement the following and provide a **progress report by 31 May 2018:**

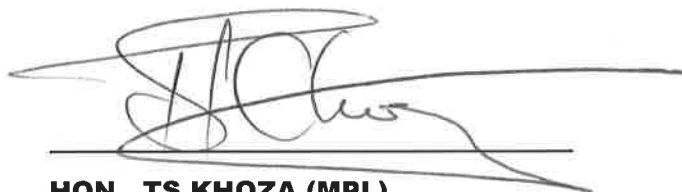
- 6.1. Maintain its good stakeholder relations with the key private sector partners to ensure that the MSTA continues to function as a world class facility that it is.
- 6.2. Ensure that the vacant position for the Deputy Chief Education Specialist for Physical Science is filled by 31 May 2018.
- 6.3. Fast track and finalize the refurbishment and resourcing of the four (4) sub-hubs of the MSTA.

7. CONCLUSION

The Chairperson of the Portfolio Committee would like to thank the Honourable Committee Members for their constructive input during the visit to the OR Tambo Maths, Science and Technology Academy (MSTA) in eMalahleni Local Municipality on 13 March 2018.

The Committee extends its appreciation to the Department of Education and all stakeholders for the constructive contributions to the oversight visit. The Committee also acknowledges the support of the Legislature officials.

The Committee therefore requests the House to adopt this report with its findings and recommendations. The Department is requested to implement the House Resolutions in this Committee report and submit a progress report before 31 May 2018.



HON. TS KHOZA (MPL)
CHAIRPERSON: PORTFOLIO COMMITTEE ON
EDUCATION; CULTURE, SPORT AND RECREATION

26/04/2018

DATE