

Zisukhanyo Schools Stages II and III Schools

Ex-Post Review

July 2016

Jonathan Miller PhD

External Evaluator

Acknowledgements

This evaluation would not have been possible without the participation of the Senior Management of the WCED Metro South District (MSD), and the Principals and staff of the ZSP Stages 2 and 3 Schools. Their assistance is much appreciated.

1 Background

As noted in previous ZSP reports, the broad objective of the three stages of the Zisukhanyo Schools Project (ZSP) has been to assist in bringing about improvements in educational standards in disadvantaged South African schools through the effective use of Information Technology, with the goal of making it possible for the children in the supported schools to aspire to well-paid jobs.

The Service Contract for this Evaluator states that: "It is important that this Project be properly monitored and evaluated on an ongoing basis. The good work and lessons learnt need to be documented and shared. For this reason an M & E Consultant(s) will be appointed for two phases of work.

"The first phase of this work involves the review and adaptation of the current M&E plan. This work will ensure that the data currently being collected is robust and can be validated. The need for additional data will be assessed. The role and selection of a control group of schools is an important part of this process.

"The second phase of this work will involve a series of end of project stages reports and ex post reports. These reports will examine the results (outputs, outcomes, impact) and assess the effectiveness, efficiency, relevance, value for money and sustainability of the ZSP intervention. They will seek to establish linkages between the outputs and outcomes of the ZSP intervention: that is, to determine the extent to which the outcomes are attributable to the ZSP intervention at the schools. Any unintended or negative influences that may have taken place can be identified. Finally a set of findings, conclusions and recommendations will be delivered that will enable lessons to be drawn for the future design and implementation of projects of this type."

As per the contract, this report is the final one. The ex-post review of Stage 1 schools was submitted previously, so this report focuses on Stages 2 and 3 schools.

Curriculum delivery began in January 2011 for Stage 2 schools and January 2012 for Stage 3 schools. The project was completed in June 2013 for Stage 2 and June 2014 for Stage 3 schools, meaning that this report is three and two years ex post respectively.

2 Methodology

The Evaluator carried out the following tasks:

- 1 Obtained from the Metro South Education Department (MSED) and analysed the externally designed and implemented Maths Systemics results for the 16 ZSP schools, and compared those results with the overall averages for the 200+ schools in the Metropole South, measured towards the end of 2015. Trends over the years since the start of the project were also analysed. The next measurement only takes place towards the end of 2016¹.
- 2 Designed, administered and analysed a short online questionnaire for completion by the school Principals (See Annex 1).

¹ Previously the Annual National Assessment (ANA) results were also gathered, but the ANA procedures were not carried out in 2016 as a result of Teacher Union objections. There is no indication whether ANAs will be carried out in the future.

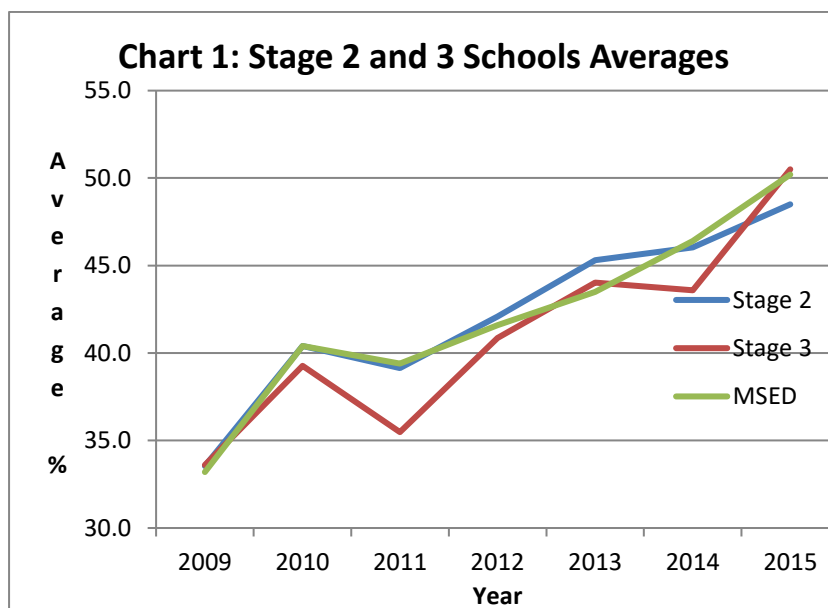
- 3 Selected a cross-section of five schools representing the two stages and reflecting a range of success in the Systemics. Visited them along with representatives of MSED.
- 4 Met with senior staff of MSED to present the results of the analyses and obtain their comments and plans for the future.

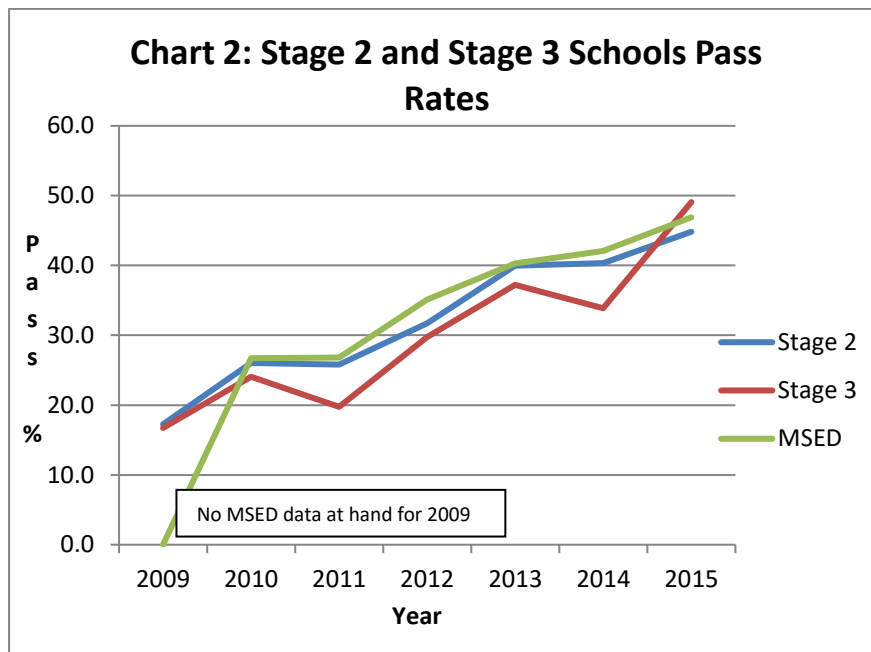
3 Results

3.1 Systemics Results

Annex 2 (attached as separate file) shows the maths Average and Pass percentages achieved for grade 6 in the Systemics tests. Chart 1 below shows the Average % combined for all Stage 2 and 3 Schools. Chart 2 below shows the results for the Pass percentages.

The general upward trend for all 3 graphs is evident. Inspection of the Tables in Annex 2 shows a wide range of trends school by school for both average and pass percentages. Most schools show steady increases from year to year, some from a very low base. Two or three schools show limited improvement. In the latest two years, the Pass Rate increased from 40% to 47%, and Average scores increased from 45% to 50%. Overall, the trends for ZSP schools are similar to the trends for MSED as a whole, over the whole period as well as for the latest two years (See commentary in the Summary and Conclusions).





3.2 Online Questionnaire

Annex 1 shows the questionnaire sent to all 16 Principals. It was designed to focus on sustainability of the project changes and the impacts that resulted. The sections capture:

- The current situation as regards equipment and lab operations,
- Whether the labs remain in operation,
- The status of the e-Curriculum Programme
- Activities of the teachers
- Impact on the learners
- E-Governance issues

All principals completed the questionnaire in a satisfactory manner. Annex 3 in attached spreadsheet shows the school by school commentary. In summary:

- a. Mostly the labs have the original number of machines with a few small declines.
- b. Generally schools have had some computer and internet problems but only in two cases has this resulted in the labs being down for a significant amount of time.
- c. One school (Westlake) has replaced all its machines (thanks to follow up donations from the original donor).
- d. Except for Thomas Wildschutt and Stephen Road, which are temporarily down, all schools are up and running.
- e. All schools have monthly contracts with Greenshoots or individual support people for technical support.
- f. Almost all are still using labs for the original grades; some have added lower and/or higher grades.
- g. Typically there are 20-30 hours a week of lab usage.
- h. Quite a few schools have upgraded software or added new applications.

- i. Almost all schools have the intended e-curriculum programmes in place; about half have induction programmes for new staff, and almost all have termly evaluations of results reviewed by senior staff.
- j. All schools are using ICT in maths teaching and admin. Generally there is a high level of collaboration between teachers.
- k. The principals all note very positive learner attitudes towards lab work and believe there have been improvements in grades as a result.
- l. Almost all schools make full use of electronic communications, and are self-sufficient in terms of ICT budgets. Sources of funds include the Education Department, school fees, donations and fundraising.

Importantly it should be noted that the available funding from school budgets, donations etc., mentioned above, is being applied in part to monthly technical maintenance contracts. Most of those contracts are with the Greenshoots technical people, while some schools contracted with particular individuals from Greenshoots.

3.3 School Visits

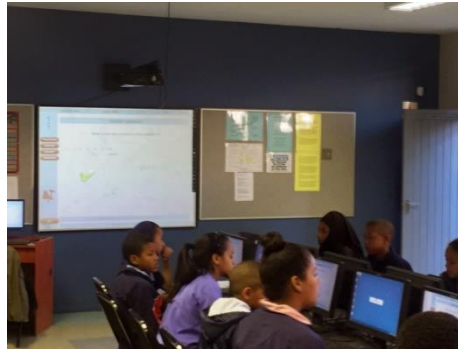
The Evaluator selected five schools for on-site visits: Sullivan, St Mary's, John Graham, Buck Road, and Westlake. He visited those schools along with two MSED representatives responsible for the e-Learning activities, Messrs Osman Sadeck and Trevor Francke. Some photos of the labs are shown below.



Sullivan Primary: Ex-Greenshoots employee now employed here to oversee lab. Awarded MSED Certificate for Above District Average in Grade 6 Maths results.



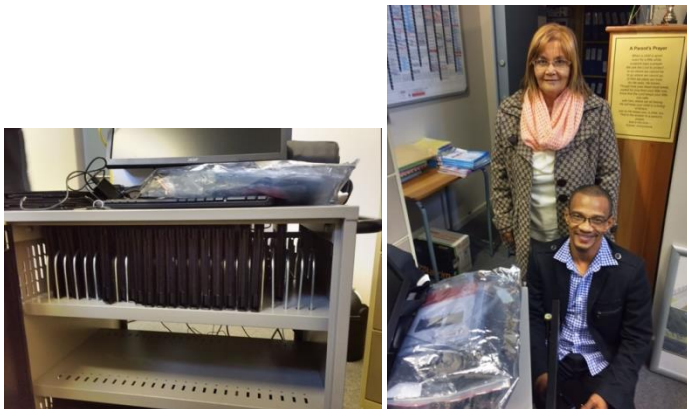
St Mary's



John Graham



Westlake: Principal, Mrs Diamond. No fee school, open for 5 years. Lab equipment replaced 2 years ago. No problems, but associated data projectors in classrooms have been down for a while.



Buck Road. Mrs Herbert, Principal and Mr. Wagner, CCA, also ex-Greenshoots. School has received and is commissioning a set of 20 tablets as shown in the portable cabinet.

Schools are generally making every effort to maintain their labs and extend their use to other subjects such as literacy, and adding new grades.

3.4 MSED Meeting

As the last phase of the fieldwork, the Evaluator met for about 90 minutes with the MSED Departmental Management team of some sixteen officials, headed up by Mr Glen van Harte. He summarised his activities and findings to date and there was a lengthy discussion thereafter. Ms Annette Fella kindly took comprehensive notes, which are attached as Annex 4. Some highlights included:

- Mr van Harte noted that MSED is the top performing District in Grade 3 and Grade 6 in the country and he likes to think that the ZSP has contributed to this. While the views of the Head of MSED are vital for ongoing support, at the stage of the meeting he was not aware of the similarities

between the ZSP results and the overall MSED results. In any event, MSED comprises over 200 schools, so even large improvements in scores for 16 schools would have little effect on overall MSED results.

- Various Departmental officials have taken a key interest in this project and have held principals to account.
- As part of their commitment to the ZSP, MSED undertook to call a follow-up meeting with the relevant principals. This meeting has still to be scheduled.
- Also, an MSED coordinator should be appointed to look after ZSP schools
- While the Department strongly supports the ZSP activities that continue in the ZSP schools, they are emphasising a new approach which they term the “eLearning Game Changer.” Every school needs to be connected to the Provincial WAN and local LANs by the end of 2016. Schools are identified as being:
 - Model: Comprising WAN, LAN or Wi-Fi, 1-to-1 learner devices, lab refresh
 - Enhanced: All the above, except for learner devices
 - Universal: Only WAN and computer refresh schools.

It was suggested that the ZSP results and impacts should feed into the eLearning Game Changer project.

4 Summary and conclusions

Despite all manner of challenges facing schools in poorer areas, obviously including financial issues, but also securing the labs, keeping them up and running, inducting new teachers, etc., the ZSP project is having a lasting impact on the sixteen schools surveyed. In broad terms the facilities and curriculum have been “institutionalised.”

Given the small but positive differences between the ZSP schools and MSED as a whole in the 2012 and 2013 ZSP reports, it would have been good to see the group of schools improving their Grade 6 maths scores more than MSED for the whole period. This is not the case and the results show that there has been a steady improvement in maths scores for Grade 6 students across the board². It is noted, however, that the measurements reported here are for Grade 6 (the only grade where external measurements are available). The labs are being used by several grades, sometimes Grade R to 7, and certainly the stated views of the principals as well as the teachers interviewed is that the ZSP model is benefiting the learning of maths. The wide range of factors influencing the different schools in the sample must also be borne in mind (e.g., two schools moved from old to newly constructed premises, one school is only 5 years old and had significant turnover of grade 6 teachers, two schools are so-called “no fee” schools, presenting exceptional funding challenges, etc.). It has also been noted several times, that the lab activity is much sought after by the learners, who get very insistent when the lab is

² This is consistent with many large-scale studies of the impact of technology on schools results, which generally conclude that technology as such has small if any impacts on scores. See for instance a 2012 study: https://v1.educationendowmentfoundation.org.uk/uploads/pdf/The_Impact_of_Digital_Technologies_on_Learning_FULL_REPORT.pdf and a 2015 report by the OECD: <http://www.bbc.com/news/business-34174796>

not available. Absenteeism on lab days is also lower than other days³. So, whether there are increases in grades attributable to the ZSP computer labs or not, the fact is that all participants in the project hold positive views of the programme and are investing to sustain the effort.

A key question that this review should answer is whether the ZSP has been sustained in the two to three years since funding ended. This Evaluator believes the answer is clearly “yes.” Computer lab support for maths learning continues in all the schools surveyed and virtually all the principals believe the Maths results are benefiting from lab work. Key factors that have helped to ensure sustainability are the strong support from MSED and from the principals in all the schools. In addition, despite intermittent problems, the labs continue to operate at a very high level of availability. This is certainly due to the ongoing maintenance contracts.

In terms of recommendations for the future, it is important to note that the world of technology is changing rapidly and MSED in particular is moving towards 1-1 learner devices (laptops, clam shell devices, etc.). Understandably the department is focusing on the many schools that have not been part of ZSP. At least one of the ZSP schools (Buck Road), however, has received tablets as part of another project, and it would be valuable to monitor how things go at that school. Will they engineer an overlap between the ongoing computer lab activities or find other areas of synergy? In the end it will be up to MSED to consciously learn from ZSP and balance their support for the ZSP model with support for their “Game Changer” model.

Jonathan Miller

External Evaluator

Wednesday, 29 June 2016

³ This also underlines the wide variations in results from school to school and the interplay between multiple factors. It highlights that the success of such a project needs to be evaluated in different ways including raw scores.

Annex 1

Example of Principals' Questionnaire

Final Review of Zisukhanyo Schools' Project (ZSP)

1 School details

School Name	PRINCE GEORGE PRIMARY
Principal	LAMEEZ RABBANEY
Teachers involved with ZSP	F. VAN ASWEGEN, L. RABBANEY, S. SIMPSON, T. JACOBS, M. SEPTEMBER

2 Computer Lab Details

Original Number of Machines	45		
Current Number of Machines	42		
How reliable is your equipment?	Lots of technical problems	Some problems	Trouble-free
How reliable is your internet connection?	Lots of technical problems	Some problems	Trouble-free

3 Computer Lab Operations

PLEASE COMPLETE IF LAB IS STILL IN USE		
Does lab continue to be used by original grade(s)?	Y	N
Is lab used by any additional grades? If Yes, please state which one(s)	Y	N
Is original software still being used?	Y	N
Please describe any changes or additions to original software	ACQUISITION OF READING EGGS PROGRAM	
	PHONICS AND READING PROGRAM	

If the lab is being used for new activities, please explain	
Approximately how many hours of educational use take place in a normal week (i.e. not test/exam weeks)	

PLEASE COMPLETE IF LAB IS NOT IN USE		
Is this temporary or permanent?	Temporary	Permanent
Why is lab not in use? E.g., technical/internet problems, funding, teaching resources, other? Please explain	N/A	
Does your school have other technology support (e.g., computers in classrooms, tablets)? Please explain including grades supported.	N/A	

4 E-Curriculum Programme

Is a CAPS-aligned e-curriculum programme and timetable in place?	Y	N
Is there an e-Curriculum Induction Programme in place for new staff?	Y	N
Do you evaluate e-curriculum performance per learner and per class every term?	Y	N
Do senior staff examine results of evaluations?	Y	N
Any additional remarks regarding the e-curriculum?		

5 Teachers

Are your teachers incorporating ICT in teaching of mathematics?	Y		N	
Do your teachers collaborate on ICT matters across grades/phases?	Very little			A great deal
Do your teachers use ICT for administration?	Very little			A great Deal
Any additional remarks regarding Teacher attitudes, activities?	LACK OF FUNDS LEADS TO CLASS E-LEARNING COMING TO A HALT.			

--	--

6 Learners

How many learners show positive attitudes towards ICT use in the lab/ classrooms?	Very few	Some		Most	Almost all
Is ICT use helping improve results?	Very little				A great deal
Is ICT use showing other benefits (e.g., reducing absenteeism, greater interest in learning) If so please explain	THE READING AND PHONICS PROGRAMME IN THE FOUNDATION PHASE				

7 E-Governance

Are school communications, documents and reporting carried out electronically?	Very little				A great deal
Is there a CCA line manager in place who communicates with the SMT?	Y			N	
Are operational costs for ICT services incorporated in the school budget?	Y			N	
What are the sources of these funds, e.g., WCED, outside donations, school fees?	CLICK FOUNDATION, N&S, FUNDRAISING				
Is the school self-sufficient in running its ICT activities?	Y			N	

Annex 2

ZSP Ex Post review

Average and Pass Percentages for Stages 2 and 3 Schools

[See attached spreadsheet]

Annex 3

ZSP Ex Post review

Principals'' responses to Emailed Questionnaire

[See attached file]

Annex 4

ZSP Ex Post review

Notes from Meeting with MSED Executive Team

DMT MEETING: OTTERY TC TUESDAY 14 JUNE 2016: 09:00 TO 15:00		
NO.	ITEM	ACTION BY
1.	<p>PRESENT :</p> <p>Glen van Harte Faldiela Chotia Thandi Jaffa Lynne Primo Dhanan Naidoo André Filander Charmaine Pietersen Osman Sadeck Guilot de Klerk Granville Stander Akeda Isaacs Terence Woolf Isobel Senosi Rodney Theys Stanley Marais Annette Fella</p>	
2.	<p>APOLOGIES :</p> <p>Walton Robertson</p>	
7.	<p>DR JONATHAN MILLER : ZISUKHANYO SCHOOLS PROJECT :</p> <p>Glen welcomed Dr Miller to the meeting who has just concluded the final independent evaluation of this project, on behalf of the Human Dignity Foundation (HDF). Trevor Francke had accompanied him on visits to five of the participating schools. Jonathan was keen to know where MSED is taking this project.</p> <p>Systemic Trends : Phase 2 and 3 schools : Roughly half of the schools are showing upward trends for Gr 6 mathematics. He will share his results. 2014 – 2015 systemics : pass rate for ZSP schools went from 40 to 47% and average</p>	

schools went from 45 to 50%. He feels this is pretty good. He would be curious to see whether this is higher than the overall MSED averages.

Principals' Survey : All the principals submitted a response. Lab equipment has remained consistent. Jonathan is interested in the fact that the equipment is getting older, but most still in use. Westlake has replaced their equipment (through Rentworks in Johannesburg). Stephen Road and Thomas Wildschutt's labs are temporarily out of operation (they are waiting for maintenance / equipment). Most of the schools have ongoing contracts with Green Shoots re servicing, and this appears to be a big plus. Some schools have added additional grades to the lab rosters, and are also offering further subjects.

School Visits : His visits confirmed what principals had indicated on their surveys. Westlake – in addition to the labs, they have white boards and projectors in most classrooms, and these are giving problems. Their computer lab is working fine. Buck Road and Caradale have also recently received tablets.

His finding is that the ZSP is being sustained, and built on, in most cases. He asked for input from the team re reporting back to HDF. Glen said that the project must be seen against the background of the elearning game changer (every school needs to be connected to the WAN and the LAN by the end of 2016). Schools are identified as being model (Fairview and Norman Henshilwood) (WAN, LAN or wi-fi, 1-to-1 learner devices, lab refresh, enhanced (all the previous, except for learner devices) and universal (only WAN and computer refresh) schools. The model schools play a similar role to full service schools (Fairview is both), in terms of being a resource to surrounding schools. Rodney said that the Curriculum support provided by Grass Roots [actually Greenshoots] must not be underestimated. Ossie said that the support is being provided remotely (they are acting on the results obtained and tailoring teaching accordingly). Charmaine said that the provision of data is crucial. She also feels that because the content of the software (language) is aligned to the ANAs/Systemics, is making a big difference. Teachers are able to identify areas of difficulty and then to address this. She feels that the provision of technical support is key to the success of this project. Akeda asked whether the evaluation shows why school results are leveling out at a lower level. He said that schools unique circumstances impact on results e.g. the new buildings at Buck Road and the upheaval associated with this. Turnover of teachers in Grade 6 is another issue, highlighted by Westlake Prim's principal. Terence asked about the role of the principal as champion. Jonathan said that this definitely impacts on the success of the programme (John Graham, Buck Road and Sullivan are good examples). Ossie said when technology is introduced, you always see

a spike in results, but then it evens out. He said that he has not yet witnessed carry over from the lab to the classroom. Jonathan did say that some schools have shown steady increases in results. He'd like to see the continuity in individual learner results, moving on from the ZSP. Ossie spoke about the assessment focus of the ZSP. Charmaine said that the flattening out of the results could be attributed to teachers not being trained to teach at higher order thinking (many don't know how). They have looked at the types of ANA questions, and many teachers can't answer these – understanding of the language is the problem. Glen challenged this – as in many instances, it is the lower order that has not been adequately mastered. Thandi drew a distinction between Buck Road and Fairview, although their parent communities need to be taken into consideration (Fairview is way ahead). Faldiela said that Die Duine and Perivale's contexts are very similar but Die Duine's results are much better, although Charmaine pointed out the good improvement at Perivale, despite not being on the programme. The role of the teacher must never be underestimated. Charmaine compared results at Buck Road and found that their move could have had an impact on results. Ossie said that any change at a school impacts on their operations (and results).

Rodney asked about MSED having a get together of ZSP schools. Glen said that he would like this to happen, but various factors have resulted in this not having taken place as yet. Glen said that we also need to have a coordinator in the District to look after the ZSP schools (William Page was identified but he's now a deputy principal, but we can only pay someone at PL1 level. This post has subsequently been lost.) Granville said that one of the legacies of the ZSP is that it should feed into the new elearning game changer. Glen said that we need to identify these issues. Jonathan asked whether these schools should continue to have dedicated labs or should they move towards classroom-based technology. Glen asked whether we should make a special case for these schools to have this technology, and Jonathan suggested that the HDF possibly come on board with hand-held devices. Ossie mentioned clamshell technology at Caradale Prim which is much more reliable and hardy than the more modern tablets. Charmaine said that new technology is not built to last (two year life span??) Ossie said that the ZSP schools are closely related to communities and finances, yet they have been able to maintain their technical standards. Glen mentioned that downtime with the ZSP was minimal, and the game changer is going to try to replicate this. Faldiela said that school selection was crucial, especially when considering the phase one schools. Jonathan will resend the 'post' report to the Phase One schools. Eastville and Liesbeeck have shown steady improvement and Mitchell Heights' results have fluctuated, but the most recent results showed a good improvement over the years.

	<p>Regular reporting from Mark and Jo was crucial in keeping MSED informed as well as addressing any potential problems. Charmaine said that any other projects running at the schools should also be looked at. Ossie said that the entire project cant' be replicated but there are small things that could be taken forward e.g. testing and data analysis which informs teaching.</p> <p>Guilot said that Fairview has had a team of therapists servicing Fairview for the past few years, which could have contributed to the LitNum results of the school.</p> <p>Jonathan thanked the team for their input. Annette to submit the notes to him. Glen reminded Jonathan that MSED is the top performing District in Grade 3 and Grade 6 in the country and he likes to think that the ZSP has contributed to this. We also have the most excited and exciting staff members that have allowed for this project to blossom and continue. CTMs and CMs have taken a key interest in this project and have held principals to account.</p> <p>Annette to make overall MSED systemic results available to Jonathan.</p>	
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--