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LABANTWANA

SOBAMBISANA INITIATIVE

PARTNER EVALUATION REPORT

The Ntataise Trust

Play group, Parent Support and Teacher Enrichment Programmes

Rammulotsi / Viljoenskroon, Northern Free State





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**Ntataise Community Outreach Programme
Rammulotsi/Viljoenskroon
Northern Free State**

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INTRODUCTION

About the Sobambisana Initiative

In 2008, the D G Murray Trust contracted five non-profit resource and training organisations (RTOs) active in Early Childhood Development (ECD) to design and implement sets of interventions for expanding access to ECD in underserved areas in different parts of the country. Called the Sobambisana Initiative, this project had the broader aim of testing new approaches to ECD which could inform the government's unfolding national ECD programme.

In 2009 the Elma Foundation and UBS Optimus Foundation joined the D G Murray Trust in funding Ilifa Labantwana, an expanded programme supporting innovation in ECD with a specific focus on rural and other deprived areas. Sobambisana became part of the Ilifa programme, tasked with testing models of ECD which could be taken to scale at the provincial or national level. It ran for four years until the end of 2011.

The Sobambisana partners included the Ntataise Community Outreach Programme, which implemented a set of interventions in in Rammulotsi / Viljoenskroon area in the northern Free State. This report evaluates its activities over the four-year programme period. While the Sobambisana Initiative has ended, Ilifa's relationship with its Sobambisana partners continues, and some of the interventions discussed in this report are still being implemented.

Ntataise Evaluation Report Format

The report starts with a quick overview of the key findings of the suite of interventions delivered by Ntataise. This is followed by an overview of its goals and interventions.

Each of the Ntataise interventions is then dealt with in turn. Questions relating to both programme outcome and implementation are addressed. The evaluation method for all partners is largely generic and is described in the main report on the Sobambisana Initiative entitled *Towards Integrated Early Childhood Development: An Evaluation of the Sobambisana Initiative (2012)*. Where statistical analyses have been conducted, these are not reported in detail but have been summarised in endnotes, and the reader is referred to the Statistical Appendix for the details. Common assessment tools are described in the 'Test and Measures' section of the main report. This partner evaluation report was sent to Ntataise before being finalised. Where appropriate, comments by Ntataise personnel have been incorporated.



OVERVIEW OF KEY FINDINGS

Ntataise focused on three main interventions as its Sobambisana project, all of which had school readiness as a major goal. These included a playgroup programme aimed at children who did not have access to preschools; the addition of a parent support component for parents at preschools and an enrichment programme to provide a stronger school readiness focus for children in local preschools.

Mosupatsela

Mosupatsela is a two-hour once-a-week playgroup programme offered for parents and children aged 3–5 years in different outdoor locations, with a focus on school readiness activities. The target was children who were not able to attend preschools, mostly because their parents could not afford fees.

- A total of **116** children were enrolled in 2009/2010. Parents were expected to attend with children so that they could support both the playgroup children and others in their homes but parent attendance was poor and inconsistent in both years.
- Significant improvements in cognition were obtained for children who attended a high number of sessions.

Lessons from the evaluation

- Review the parent component and decide whether it is a critical element or not. If it is, then steps should be taken to improve attendance and to monitor whether the programme is implemented at home through periodic home visits.
- Encouraging regular child attendance is critical to realising positive outcomes. Running the programme outdoors affected attendance negatively during cold, wet and windy weather and alternative venues or a play bus option should be explored.
- While the playgroup programme delivered promising child outcomes, numbers reached were low and per child cost is something to be considered as a scaling issue.

The Preschool Support Programme (PSP)

The Ntataise PSP is a series of workshops aimed at parents of children enrolled in preschools. Matrons (preschool supervisors) are trained to deliver the workshops each of which includes of a listening and sharing element to support the parent, an early brain development knowledge building module or bookmaking session, and a learning game (activities to be done with the child at home).

PSP was offered by 14 of 15 preschools in the Rammulotsi community and enrolled 130 parents over two years.



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- Attendance was too poor (40% in 2009 and 50% in 2010) for sufficient parents to have received sufficient of the programme to have benefitted as intended. As a result no outcome evaluation was undertaken.

Lessons from the evaluation

- Matrons' other duties and lack of an incentive made it difficult for them to implement PSP.
- The programme as it has run for the past two years is not sustaining sufficient attendance to justify its continuation in the current form.
- To improve attendance, consider incentives for parents and run the programme at times which are acceptable to parents.
- Make sure that those delivering the programme are appropriately trained and ensure regular professional supervision.

The Ntataise Enrichment Programme (NEP)

The Ntataise Enrichment Programme aimed to assist practitioners who have received formal training with practical implementation of a quality learning programme for 3 – 5 year olds in their classes and prepare them for school. This included provision of suitable learning materials, theme workshops and on-site modelling of good practice. NEP was offered to 28 participants teaching approximately 700 children over two years (an average of 25 children per class)¹. Findings are that:

- At Grade R and before controlling for age, the results indicate that children who have attended a preschool outperform the other two groups on Language, Cognition, Counting and Resilience. However when age differences are controlled , and while the children who have been in ECD perform best, the result is no longer statistically significant. The finding nonetheless indicates the potential of preschool attendance for enhancing developmental outcomes in disadvantaged children.
- Evidence from classroom observations and focus groups indicates that the NEP has been successful in helping practitioners to facilitate learning through better interactions with children and to provide stimulating activities with a literacy and numeracy focus.

Lessons from the evaluation

- Evidence suggests that the enrichment programme is effective in improving teaching practice and classroom quality and strengthens calls for improved on-site support to improve ECD quality. A post intervention follow-up would indicate whether these gains are sustainable in the absence of regular on-site support.
- Implementation is strengthened when the matron supports the practitioner. Adapting the intervention to target matrons as well as practitioners would support implementation.



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- Practical on-site support where appropriate teaching practice is modelled and practitioners assisted with particular capacity building needs, together with the provision of appropriate equipment is key to the success in improving programme quality.
- This type of support is intensive and requires an experienced trainer and equipment and has cost and human resource implications for the number of practitioners that can be reached. An exploration of the average number and spacing of visits to achieve results would be useful.

Implementation lessons from the Ntataise Interventions

Implementation of the Ntataise programmes was enabled by:

- The proximity of Ntataise to the interventions
- Ntataise being well known and established in the delivery sites (Rammulotsi and Odendaalsrus) with tried and tested models for interventions in preschools
- Delivery of Mosupatsela and the Enrichment Programme by highly experienced, motivated trainers
- The use of external experts in the design and monitoring of the interventions, which all had clear written programmes, and
- Availability of resources and appropriate, specialised play equipment.

Challenges experienced in the implementation were as a result of:

- The assumption that parents would be motivated and/or available to participate in the Mosupatsela and Preschool Support Programme when they were not challenges basic programming premises that parents would reinforce learning at home and spread programme content to other children in the household.
- The assumption that matrons would be willing (without incentives and with little training) to take on the burden of presenting PSP workshops.
- Programme oversight of the PSP programme being undertaken on a distance basis with relatively little on the ground contact and local oversight being placed in the hands of a new staff member.



THE NTATAISE EVALUATION

Introduction

The Ntataise programmes were with one exception located in the township of Rammulotsi (established in 1921) which is adjacent to Viljoenskroon in the Moqhaka Municipality, Fezile Dabi District, in the Northern Free State. The exception was the implementation of the Ntataise Enrichment Programme (NEP) to the Odendaalsrus area near Welkom during 2010.

Ntataise has been operating in the northern Free State since 1980 and has a significant national footprint in the field of ECD practitioner training. A particular focus of their work has been on capacitating ECD sites in agricultural areas among farm workers.

During the time of the Sobambisana initiative Ntataise established the ECD Training and Community Resource Centre, a purpose-built centre in Rammulotsi with administrative offices, a toy library and training rooms.

Rammulotsi is in the heart of the maize-producing area of the Free State and has some industry associated with agriculture. The cultural mix consists mainly of Sotho-speaking people, interspersed with Xhosa, Zulu and some Pakistani. The majority of families are poor. According to the profile, the population of Rammulotsi/ Viljoenskroon is estimated at 51,000 people. Approximately 25% of Rammulotsi residents are employed, mainly in agriculture and others in Viljoenskroon. According to the Index of Multiple Deprivation for Children (SAIMDC)², the Moqhaka Municipality ranks among the moderately deprived areas for children in South Africa. As the area is large this figure hides the considerable variation. When small areas are examined,³ child deprivation in and around Rammulotsi falls within those areas ranked third most deprived (out of 10) for children in South Africa.

Rammulotsi has fifteen preschools, a clinic and a hospice, an ECD forum, a Children's Rights Forum, and several women's societies. Most housing is formal with space for gardens. Informal settlements are evident on the periphery.

According to their proposal to the donors in 2007:

'(the) principal aim of the Ntataise Community Outreach Programme is to support the holistic development of a greater number of children in their early years, specifically those growing up in disadvantaged circumstances. The essence of this Ntataise Community Outreach programme is to use existing ECD centres as entry points to extended access to ECD to an increased number of children; strengthen parent involvement programmes; improve the quality of ECD learning; and work with primary schools in an attempt to ensure children experience a positive transition from ECD centres to primary school.



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The fourth element was intended to involve (among other things) familiarisation of Grade R and 1 teachers in Public Schools with staff in community based preschools and similarly familiarisation with Grade R and 1 on the part of community based ECD staff. It was also intended that parents of children in pre-schools participating in the PSP would participate. As the process unfolded over the period of the evaluation, Ntataise chose not to embark on this initiative because according to them:

'school principals and management teams showed little if any interest in developing a relationship with the preschools'.

However, the other components of the project had a strong focus on school readiness (for example Mosupatsela and NEP) which Ntataise considered would assist with smooth transition to schools.

The Ntataise suite of interventions delivered is described in Table 1.



Table 1: Ntataise Community Outreach Programme: Goals, Activities, Outputs and Outcomes

Overall goals per funding proposal	Specific goals	Activities	Outputs	Short-term outcomes	Long-term outcomes (Grade R)
<p>'The principal aim of the Ntataise Community Outreach Programme is to support the holistic development of a greater number of children in their early years, specifically those growing up in disadvantaged circumstances.'</p>	<ol style="list-style-type: none"> 1. Address the basic unmet needs of children. 2. Improve ECD knowledge and early stimulation in the home. 3. Increase access to early stimulation for children not in ECD. 	<p>Mosupatsela Playgroup Programme</p>	<ol style="list-style-type: none"> 1. Parents and 3-5 year old children are enrolled. 2. Parents participate in the programme. 3. Children participate in the programme. 	<ol style="list-style-type: none"> 1. Children have: Enhanced cognitive and language development, and access to nutrition, documents and services. 2. Parents /Caregivers: practice early stimulation in the home, including with children who do not attend playgroups. 	<p>Children perform better on developmental assessments than those who have not had Ntataise interventions.</p>
	<p>Ensure the quality of early childhood development programmes in preschools</p>	<p>Training and Support for ECD Practitioners and Teachers</p>	<ol style="list-style-type: none"> 1. Teachers and practitioners are enrolled. 2. Training workshops are held. 3. Equipment and educational resources are provided. 	<p>Teaching and learning environment quality is enhanced.</p>	
	<ol style="list-style-type: none"> 1: Address the basic unmet needs of children 2. To increase access to ECD by strengthening PSP. 3. Improve ECD knowledge and early stimulation in the home. 	<p>Parent Support Programme (PSP)</p>	<ol style="list-style-type: none"> 1. Preschool matrons agree to deliver PSP from their preschools. 2. Matrons are trained. 3. Parents with children in preschools are enrolled. 4. Parents participate in the programme. 	<ol style="list-style-type: none"> 1. Parents /Caregivers ECD knowledge is increased. 2. Parents practice early stimulation in the home, including with children who do not attend preschools. 	



THE MOSUPATSELA PLAYGROUP PROGRAMME

This section of the report commences with a description of the programme. It then proceeds to present programme outcomes commencing with reach, followed by findings on the outcomes for children, and then adult caregivers. Reflections on programme implementation and benefits are provided based on the experience of the M&E team and on interviews with programme staff and beneficiaries.

Programme Description

The targets of the programme are caregivers and their children aged between 36 and 60 months who are not in centres and likely to be unable to afford preschool fees. They are identified through preschool supervisors (known as *Matrons*), Ntataise field workers, and trainers. Potential participants are invited to a meeting at the centre or receive a home visit to explain the programme. They then decide whether or not to enrol.

According to Dr Ingrid Herbst who was central to the design of Mosupatsela, the objective for children is to:

'enhance capacities underlying school readiness in those children whose parents cannot afford to send them to preschool, and to enhance parental ECD knowledge, and their capacity to stimulate their children's development at home. The concept is that not only will children who attend Mosupatsela benefit, but through parental participation, other children at home will 'indirectly' benefit from the programme.'

A comprehensive manual⁴ is followed by the facilitator, who during the evaluation period, was supported by Dr Herbst. The manual lays out in detail, the programme to be followed.

The programme was designed to foster concentration, memory, and reproduction; reasoning abilities; ability to apply learnt material to other situations; perseverance; basic numeracy and science; language (literacy); sharing, respecting others, and independent learning. Age appropriate social and emotional development (particularly sharing, adherence to rules, perseverance and emotional regulation) is also encouraged.

The intervention also seeks to improve parents' ECD knowledge. Parents (or the child's main caregiver) accompany the child to the Mosupatsela playgroup session which is held weekly for two hours. For part of this time parents observe facilitators working with the children and are encouraged to engage in the play of their children under the facilitator's guidance. For part of the session, parents meet to receive inputs on ECD and discussion led by one of the two ECD trainers present at each session.

A vehicle transports the practitioner, a gazebo, and equipment, to a specific (and different) site in Rammulotsi on each of four weekdays in the school term. Once on site,



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tables and chairs and equipment are laid out, and the programme for the morning commences. A healthy snack is served. Children and their caregivers attend one two hour session per week.

The M&E team worked with Ntataise to assist them to develop an explicit Theory of Change (TOC) for Mosupatsela. The TOC submitted to the M&E team in 2010 states:

'Mosupatsela envisaged development of children's developmental tasks underlying school readiness... This was to be achieved by providing activities for children to enhance a range of skills.'

'Parents and Carers would also learn by DOING and OBSERVING. Mosupatsela aimed at also including a practical session for carers where each one could explore and play with the educational toys and materials of the day to discover its benefits for the child or children in his/her care. Following a discussion of their experiences around this, carers are expected to display more interest and understanding when watching the child in their care using the same materials.'

Mosupatsela was therefore intended as a two generation programme within which children were to be provided with learning opportunities, and parents would learn how to enhance the learning environments of their children at home. That is why Ntataise specified as *indirect beneficiaries* of the programme, the other children in the household who did not attend the playgroups. Participation by parents was therefore central to the model.



Left: children on their way to a Mosupatsela playgroup session.

Right: Children working with shapes.

During the period of evaluation, the number of sessions offered varied across the groups from nineteen (19) to twenty-seven (27). In 2009 the maximum offered was twenty three (23) and in 2010 it was twenty seven (27). The average offered across the two years was twenty three (23). According to the Ntataise report to the M&E team (July, 2011) this



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was considerably less than intended.⁵ On average, *eight* parents and *fifteen* children are expected to attend each session. Dr Herbst has conducted assessments of parent knowledge and child development over the course of Mosupatsela using her own instruments. These will not be reported in this evaluation as the focus is on common tools used across participating organisations.

Outcomes of the Mosupatsela Programme

Reach of Mosupatsela

In their proposal to the donor, Ntataise envisaged reaching 120 parents and children in years 1 and 2 (2009 and 2010). Targets for subsequent years were to be ‘projected on the success of this first year’.

Targets, enrolment and attendance data is presented in Table 2. The *enrolment* figures were provided by Dr Herbst. It is not possible to know how many of the ‘indirect target’ children were actually reached, but an estimate is possible from the numbers of parents who enrolled. The numbers in Table 2 are *not* the same as those who were included in the evaluation of child outcomes as only paired data was utilised. This was not possible for children who had dropped out or were not present when the assessments were completed.

Table 2: Reach, Enrolment and Attendance in Mosupatsela Playgroups 2009-2010

Group	2009	2010
Parents		
Parent Direct** Target	40 – 60	40 - 60
Parent Direct Reach (Enrolment)	45++	46
Average parent attendance with a child	9 Sessions (out of 24) (38%)	7 Sessions (out of 27) (26%)
Children		
Child Direct Target	60	60
Child Direct Reach (Enrolment)++	60	56
Average child attendance+	9 (out of 24) (38%)	17 (out of 27)+ (61%)
Child Indirect target*	180	180
Child Indirect Reach*	68 (38%)	50 (28%)

*NOTES: ** Refers to enrolment numbers for parents and children. + Not all playgroups offered 23 (2009) or 27 (2010) sessions. There was therefore variation in the maximum number of sessions it was possible for a child to attend. Programme duration was increased for 2010 following the advice of the M&E team. ++ Based on figures supplied in a report to the M&E team by Dr Herbst. * Children not in Mosupatsela sessions but whose development was expected by Ntataise to be enhanced by parental participation (based on 1.5 children per parent as stated in the Ntataise Proposal).*



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The findings on reach are:

- the numbers of both adults and children who participated in the programme are lower than anticipated, particularly in the case of the ‘indirect targets’ proposed by Ntataise which are dependent upon parent participation.
- regarding the utilisation of Mosupatsela by children and adults, as noted above, some playgroups were offered more frequently than others (delivery was for example affected by poor weather). Some groups of children were offered more inputs than others (a source of bias). The attendance data must be considered in this light.
- child attendance was particularly poor in the first year (on average 9 of a possible 24 sessions), improving considerably in 2010 (17 of a possible 27 sessions).
- parental attendance was very poor in both project cycles (**33%** on average). This means that the goal of improving parent ECD knowledge through Mosupatsela *only applies to the very limited number of parents who had attended regularly.*

Part of the rationale for providing the Mosupatsela playgroups was to expose parents to ECD knowledge so that they could enhance developmental opportunities for children at home. With such poor attendance this aspect of the programme could not realise this objective. Reasons for poor attendance will be discussed at a later point.

Effects of the Mosupatsela Programme on Children

The findings that follow are restricted to children whose outcomes were tracked for the evaluation and were tested on the various outcome measures and for whom valid data was available. Note this number is *less* than the total that enrolled in Mosupatsela.

Note that the numbers of children change in the analyses that follow as not all children were available for assessment. Only children with valid data at both baseline and follow-up are used. Child beneficiaries and Age are depicted in Table 3.

Table 3: Mosupatsela Evaluation Sample

	Sample size and average baseline age, years (standard deviation)	Sample size and average follow-up age, years (standard deviation)
Cohort 1: 2009	N = 35 4.06 (SD 0.51)	N = 31 4.61 (SD 0.50)
Cohort 2: 2010	N = 40 4.79 (SD 0.45)	N = 33 5.42 (SD 0.49)

Malnutrition in the early years is known to affect psychological development as a consequence of its detrimental impact on neurological development.⁶ It is therefore important to measure each child and examine the impact of growth status on the developmental outcomes of interest.



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As in the other Sobambisana programmes, children's growth status was assessed using WHO standard procedures and height for age and weight for age was calculated using the WHO Anthroplus package.⁷ Child growth status was measured at the commencement of each programme cycle and is reported in Table 4.

Table 4: Mosupatsela evaluation sample: growth status

Groups	Height for age 54 children assessed		Weight for age 79 children assessed		
	2009 and 2010 cohorts combined	Normal	Stunted	Normal	Underweight
		44 (81%)	10 (19%)	47 (87%)	7 (13%)

The stunting figures are not representative of the under-five population in the study site. The growth status of the Mosupatsela sample is of concern, and is close to the rate found for rural areas. The under-weight rate is perhaps of more concern in that it exceeds the rural average (8%).⁸

Programme outcomes of Mosupatsela children

There is no comparison group for this evaluation as Ntataise felt it would be too challenging to enrol a wait-list comparison group. The original outcome evaluation design attempted to compensate for this by use of an active comparison group. In this solution, the intention was to compare Mosupatsela child outcomes with those whose parents participated in the PSP intervention.

However, as there were very few participants in the PSP who completed the requisite number of sessions (see discussion of PSP below), this comparison was not feasible. As we only have pre-post comparisons on Mosupatsela children, results must therefore be treated with caution.

Access to Services

In the Mosupatsela programme, and although this was not a major focus, facilitators were tasked with assisting parents / caregivers to access state services (e.g. health and social services) and to access ID books and grants.

It is not necessary to report the data in tables as access to key services was high at the outset: **94%** of the participants had Child Support Grants (CSG) at baseline and this increased to **96%** at follow-up. Similarly, **96%** had Road to Health booklets at baseline and **98%** had them on follow-up.

High access indicates that services support is likely to be good in the Rammulotsi area.



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Evaluation design for assessing the outcome of Mosupatsela

Mosupatsela was designed to improve the readiness of children for school. Two elements of readiness can be considered to be their level of cognitive and language development. In what follows, we pose a question for each analysis.

As noted, there was no comparison group to permit a quasi-experimental evaluation design. In order to partially address this problem, the 2009 and 2010 cohorts were combined and split into two groups on the basis of <50% (*low dose group*) or >50% attendance (*high dose group*) based on a total of 27 possible sessions. Note that 2009 children had the possibility of attending 23 sessions⁹.

Outcomes for Cognition and language

The Grover-Counter Scale was used to assess children's cognitive level. The test has norms for black rural children¹⁰ (the level at which children are expected to perform on the test).

A test constructed specifically for this evaluation based on Shipley and McAfee (1992)¹¹ was used to assess language development (see Evaluation Method section of the main report). As the test is not normed and children would be expected to improve with age, effects of age are controlled in analyses.

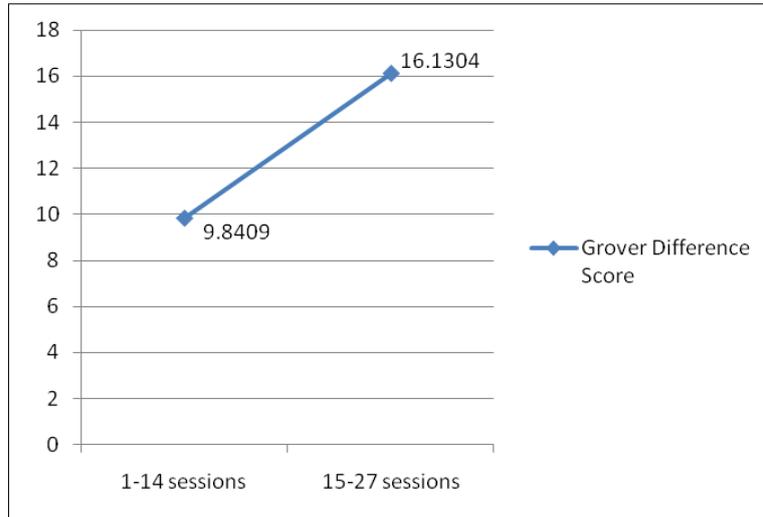
It is important to note that one would expect *positive change* on *both measures* simply due to the child's maturation over the course of the intervention. In the outcome evaluation, changes in age were controlled by computing the difference between baseline and follow-up to derive *change scores*. If programme dose makes a difference, one would expect that the high attendance group would change more regardless of maturation effects.

What is the effect of high and low attendance on cognitive and language development?

Findings for cognition are reported in Figure 2.



Figure 2: Effects of Attendance at Mosupatsela on Cognitive Development



Following statistical analysis, the main findings are¹² that children who attended more than 50% of the sessions made more than two thirds of the gains experienced by those who attended less than 50%.

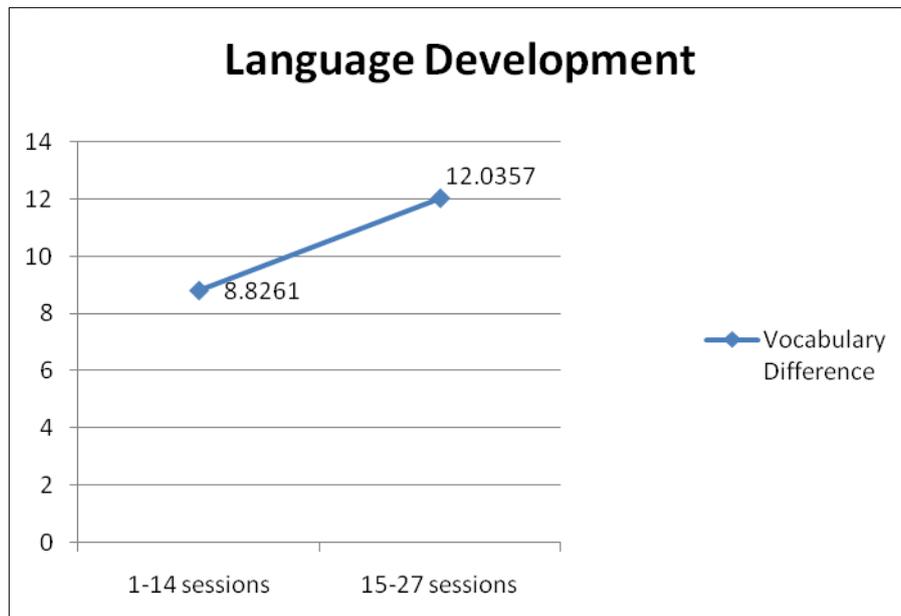
Attendance by itself is not likely to be the sole cause of the change in Grover scores. There may be a selection effect. For example, children who attend more sessions may be different to those who attend less. They may have had parents who were more aware of the need to assist their children in preparation for school and therefore ensured that they should attend. We are not able to tell, as we do not have this information.

Findings for language are reported in Figure 3. The findings are that, while there is some language development gain in those children attending more than 50% of the sessions, the result is *not statistically significant*.

It is not immediately apparent why language gains were not as great as those for cognition. However, it is plausible that the Mosupatsela programme activities would be more likely to affect cognition than language as there is greater emphasis on activities likely to stimulate the former.



Figure 3: Effects of attendance on language development



Does a child's participation in Mosupatsela make it more likely the child will be within the norm for age on cognition at follow-up?

As indicated above, raw scores on developmental measures are expected to improve with age. Standardised scores allow us to compare each child's performance with the norm. Norms for age are only available for the Grover Counter Scale so language was excluded from the following analysis. As we were concerned that children's growth status would affect change, children assessed as stunted at baseline are excluded. Findings are presented in Table 5 and Figure 4.

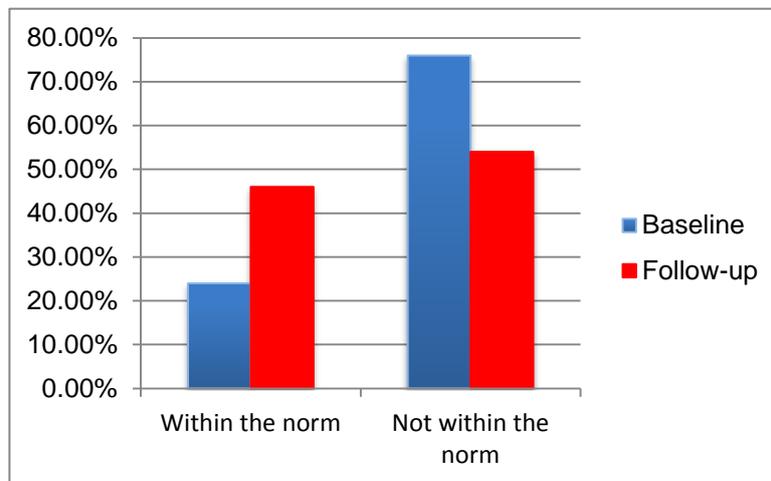
Table 5: Children within the norm for age for cognition on the Grover-Counter Test

	Within the norm for cognitive development		Not within the norm for cognitive development		Total
	N	% of total	N	% of total	
Baseline	13	24%	41	76%	54
Follow up	25	46%	29	54%	



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Figure 4: Proportions of children within the norm for age for age for cognition



Statistical analysis confirmed that:

- More children were within the norm for their age after the intervention than expected by chance¹³.
- More important is that (even though the numbers are small), there was a dramatic increase in the proportion of children who were within the norm for their age on the Grover Counter Test of Cognitive development (from **24%** to **46%**).
- The fact that less than fifty percent of the children are within the norm for age at the end of the intervention remains cause for concern.

Next we asked the question:

How much difference to children's level of cognitive or language development does more than 50% participation in the programme make when compared with those who attend less than this amount?

The statistic is known as the Effect Size of the intervention, and tells us about the size of the effect of participation in more than 50% of Mosupatsela sessions. For cognitive development we calculated an Odds Ratio.

Statistical analysis showed that:

- Children who had attended more than 50% of sessions were **1.53** times¹⁴ more likely to be within the norm for their age than those who attended less than 50% of the sessions.
- There is a *strong* effect of increased participation on children's cognitive development.

To examine the Effect Size for language, a different calculation is required due to the nature of the data. This is the *Standardised Mean Difference*¹⁵.



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What is the size of the effect of greater participation on language development outcomes?

- As indicated previously, there are no norms for the language test. We can however estimate the effects of different levels of participation in playgroups (again attendance of < or > 50% of sessions) on improvements in language scores. Statistical analysis showed that:
- Children who had attended more than 50% of sessions showed greater change in language development than those who attended less than fifty percent.
- There is a *moderate* effect of increased participation on children's language development.

This finding confirms the observation that Mosupatsela playgroups do not have as much impact on language as on development.

- These findings are very encouraging. They do indicate however, that for Mosupatsela to have the intended gains on cognitive development in particular, participation in more than 13 sessions is required.

What factors influence the effects of the Mosupatsela programme on a child's cognitive development?

To answer this question factors likely to affect change (and which were available for analysis) were examined. It is reasonable to expect that the following variables would affect the probability of children changing over the course of the programme: age, growth status (Stunting Z Score and Underweight Z Score), and participation (number of sessions attended). Statistical analysis was conducted to establish which of these factors predicted the children's level of cognitive development (and to what extent) at the end of the Mosupatsela programme.

The analysis¹⁶ showed that:

- Children who commence the programme at an older age, who are better nourished and who have better growth status (less likely to be stunted), and who perform better on cognitive development at the start of the programme do best in the end.
- The level of cognitive development at baseline is the most powerful predictor of cognitive functioning at the end of the intervention (contributing 54.6% of the effect on cognitive levels at the end of the programme).
- Underweight, and stunting influence the effects of the programme on cognitive development scores at the end of the intervention.

In summary, the Mosupatsela programme is most likely to benefit older children (those in the upper age range of the evaluation group), and those whose cognitive capacity is better developed at the start. Poor nutritional status reduces the probability that the intervention will produce the desired effects.



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What factors influence the effects of the Mosupatsela programme on a child's language development?

The same type of analysis was carried out for language. It shows that¹⁷:

- Children who are better nourished and who have better growth status (less likely to be stunted), and who perform better on language development at the start of the programme do best in the end.
- The level of language development at baseline is the most powerful predictor of cognitive functioning at the end of the intervention (contributing 65% of the effect on language levels at the end of the programme).

The findings are very similar to those for cognitive development. While underweight and stunting do influence the extent to which child's language proficiency changes over the course of the programme, children's language competency at the start is the most powerful predictor of the extent to which they will benefit from Mosupatsela.

The M&E team has been informed that Dr Herbst has been assessing the performance of children in Mosupatsela on School Readiness Risk Areas. Her results indicate improvement over time however children remained below the age norm on these tests at the end of the intervention.

Reflections on Mosupatsela implementation

Data sources

Data sources for this section of the report are drawn from the common data sheet compiled by Ntataise, M&E reports, reports to donors, reports provided by Dr Herbst, records of meetings with Ntataise staff conducted over the period of the evaluation, field visits by the M&E team, and interviews with programme staff and parents conducted in June 2011.

Did Mosupatsela reach its intended targets?

Mosupatsela targeted parents with children aged 3 to 5 years in the Rammulotsi community who did not have the opportunity or means to attend a preschool. The enrolment process involved approaching caregivers of children who were not in preschools and explaining the programme to them. Furthermore, parents who were interviewed explained that the programme was a mobile crèche reaching out to disadvantaged neighbourhoods to assist children of unemployed parents who cannot afford preschool fees. They had joined because the child support grant did not cover preschool fees but they wanted a better start for their children's education.

- These observations indicate that Mosupatsela reached its target group.



Partner evaluation: Ntataise Community Outreach Programme

Was Mosupatsela delivered as intended?

As is evident in the attendance data presented above, parent / caregiver attendance was very poor (39% of sessions in 2009; 26% in 2010). Child attendance was 39% in 2009 and much improved in 2010 at 61% of sessions on average. This means that on average over the two years, enrolled children experienced half the inputs provided, while caregivers received one third. There was some attrition due to death of parents in both years.

- It is evident that on average, neither the children nor their caregivers received the amount of inputs intended. Programme staff mentioned that intermittent attendance was a challenge and likely to affect outcomes because sessions built upon each other.

Programme staff attributed the poor attendance of parents to work opportunities at harvest time or through the Expanded Public Works Programme, and to days on which grants and pensions were to be collected. Staff also mentioned the impact of deep poverty and other challenges affecting participation. At interviews conducted after the programme had been delivered, staff mentioned that, some parents reportedly used the programme as a cheap alternative to preschool and were not interested in participating themselves.

- A factor reducing the number of sessions attended was that playgroups operate in the open and in cold temperatures or inclement weather would be poorly attended or cancelled altogether.

The quality of the inputs as observed by the M&E team in the field was nonetheless judged to be sound and to follow the practice outlined in the Mosupatsela guidelines, and as indicated in the quantitative analyses, children who attended a high number of sessions clearly benefitted from the programme.

- Assessment of programme delivery suggests that the intended transfer of ECD knowledge to the home situation is unlikely to have occurred in a consistent manner both within and across the playgroups due to poor or variable parent attendance.

The very poor parent exposure (often due to their poor circumstances), indicates that the while the TOC regarding the value of parental participation was *plausible* (two generation programmes are regarded as good practice¹⁸), this component of the programme theory was not implementable in many instances.

As Evans notes, good attendance and long duration are necessary for parent groups such as those offered by Mosupatsela to have impact:

'Programmes that work best provide regularity and intensity of inputs through one-to-one home visits and/or parenting groups over at least a year; two to three years of intervention are more likely to sustain gains over time' (p. 3).



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With few exceptions, the benefits of Mosupatsela to parents are unlikely to have been realised.

Focus group interviews were conducted after the conclusion of the 2010 Mosupatsela programme with parents (who had been regular attendees) to explore their experiences.

An individual interview was conducted with the programme manager. Their responses highlight both the benefits of participation and the barriers.

Parents commented that the programme had helped the children. For example:

'Our children are really smart; my boy could not handle a pencil, now he holds a pen like a teacher'.

They noted that their children's behaviour had changed: they were able to play with others and communicate appropriately with elders (an important culturally required skill). Programme staff also commented on improved prosocial skills as well as improvements in concentration and perseverance.

It should be noted that these changes would be expected with children's development and it is difficult to assess whether what the parents and the practitioners were observing was an outcome of the programme or development. It is probable that both played a role.

- Parents felt that they had learned to take a serious interest in their children's education in particular but also their general wellbeing. They enjoyed the play sessions and they valued working on activities together.

However, there was a request for the programme to be offered more than once a week and a parent mentioned that it was difficult to find things at home to use as substitutes to the toys in the programme and to practise the skills with the children.

- The need for different accommodation so that sessions could take place regardless of the weather in circumstances that were not distracting for children was stressed by both parents and the Mosupatsela facilitator.

The Programme facilitator suggested that participation of parents in the sessions could be increased by including a more open discussion where experiences were shared and designing activities which encouraged parents to be more actively involved in the sessions. She reported that parents had said that while they were keen to apply what was learned at home, they often struggled.



Mosupatsela conclusion and recommendations

Outcomes

For both language and cognition:

- Those children who attended more than fifty percent of sessions did *significantly* better than those who attended less. The implication is that if Ntataise is to realise its objectives of improving the developmental capacities required for school: they need to ensure that children attend a minimum of 13 and probably at least 27 sessions.
- Those children who are at a higher level of development on these measures at the start of the intervention will benefit most.
- It is also the case that these children are less likely to suffer from underweight and malnutrition.

Reach and efficiency

As in all the other interventions, *enrolment* (reach) is *not* a good indicator of the number of parents benefiting from the programme. If they do not or cannot attend they cannot benefit and therefore cannot take the skills home to improve the stimulation of their children. Also, there is a significant reduction in cost efficiency when attendance is poor.

- The reach of Mosupatsela to parents was much lower than anticipated and parental participation was very low. There are no doubt a number of reasons for this.
- Unless Ntataise can increase the level of parental participation, its goal of providing ECD information that will lead to stimulation in the home will only be realised for very few.
- A key learning is that it may be too challenging to bring parents into an intervention of this nature in a sufficiently consistent manner for it to make a difference to their practices in the home.

It may be more valuable to focus on the service to the children (via the learning opportunities provided) and to encourage their regular attendance. Should parents attend that would be an added bonus but not central to the intervention.

Scaling and costing

- In determining the suitability of Mosupatsela for scale up, a careful costing should be undertaken.

While delivery of the intervention will cost less per child than preschool, there are quite significant costs to be considered. The capital costs include a large vehicle, gazebo and other furniture and specialised play materials. In addition the programme facilitator commented on the need for an experienced trainer to run the sessions, though other members of the team did not share this view. Dr Herbst mentioned that two trainers are



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needed to implement the parent component properly. Numbers that can be effectively reached are relatively small, and parents mentioned that part of their role was to help the facilitators to reach all the children and help them to complete the tasks.

- It is likely that finding inside locations for the groups (instead of using gazebos in then veld) would also increase attendance. And it would be worth a comparative costing of the use of different community locations or a playbus option.

PARENT SUPPORT PROGRAMME (PSP) AT EXISTING ECD CENTRES

This section of the report starts with a description of the PSP programme and then discusses participation rates. No outcome measures are available.

Parent Support Programme (PSP) Description

The Ntataise PSP is delivered in Rammulotsi preschools. Ntataise describes the primary target of the intervention as parents/caregivers of enrolled pre-school children between the ages of 4 and 5 years. This age was largely determined by the evaluation sample needs as Ntataise has indicated that they would like the programme to be available to all parents and particularly new parents, whose children may be younger. Parents are the direct beneficiaries, while all their children as seen as indirect beneficiaries. Children do not participate in the programme but are intended to benefit from the education in early childhood received by their parents during the course of the intervention.

The aim is to improve the ECD knowledge of participating parents/caregivers. The theory of change is that through the provision of ECD knowledge, participants will be capacitated to provide enhanced developmental environments for their children thereby adding value to the early learning opportunities provided by their preschools, and also extending the benefit to their other children who are not in preschool.

The PSP was designed by Dr Faith Lamb-Parker who was based at Columbia University in the United States and who works extensively in Africa. It consists of 10 two hour workshops, which are intended to be delivered by preschool supervisors (known as *matrons*), once per month on weekday afternoons at participating preschools. Matrons are trained to deliver the programme (over two days). They do not receive remuneration for this service.

Each workshop consists of a listening and sharing group, an early brain development knowledge building module or bookmaking session, and a learning game activity (drawn from the Abecadarian Project curriculum¹⁹). These are developmental activities easily replicated in the home setting and covering different domains of development. In the Listening and Sharing Group parents discuss their own feelings and attitudes about the role teachers play in their children's educational progress, participate in 'Life Load' exercises designed to encourage exploration of the major challenges in their lives (and



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how this might affect their children) and the supports that may be available to assist them (including support from group members). This aspect of PSP provides a form of psychosocial support to participants. They also talk about their expectations and aspirations for their children's future schooling and development. Through the workshops parents are intended to experience and learn to appreciate the value of play, to be more responsive to their children's interests and needs, to understand the importance of stimulation for brain development and to learn games to play with their children at home without toys or special equipment.

It was also intended that matrons provide advice and assistance to parents in terms of referrals to health and social services. This aspect however was not followed up systematically or documented and Dr Lamb Parker comments that it was less successful than the other aspects of the programme.

PSP Programme outcomes

Reach

Enrolment targets and participation are depicted in Table 6.

Table 6: Reach, Enrolment and Attendance in the PSP 2009-2010

Enrolment		
Participation Target 450+	Enrolment 2009	123*
	Enrolment 2010	107
Participation		
	Average workshop attendance by parents (out of a possible 10)**	
2009	5 (50%)	
2010	4 (40%)	

*Notes: + Derived from the Ntataise Proposal, 2008. ** Based on those entered on the common data sheet by Ntataise.*

In their proposal, Ntataise estimated that the PSP would impact on children of attending parents because they would deploy the skills they learnt in the workshops at home. The estimates suggested that in years 1 and 2 of the programme (2009 and 2010), and based on the target enrolment by parents, 900 children would directly benefit from their parent's participation in PSP. A total of 675 other children per year in these families were also expected to benefit (based on a ratio of 1.5 children per parent).

- Given the much lower enrolment than expected, the high dropout rates and poor attendance, it was not possible that these ambitious targets could be reached.

While the original M&E design had made provision for this, participation rates were deemed too poor to allow for analysis of programme effects. Attendance was very low



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and the sample of those who attended more than seven of the 10 sessions was too small for meaningful analysis.

Reflections on Parent Support Programme implementation

Data Sources

Data sources for this section of the report are drawn from the common data sheet compiled by Ntataise, M&E reports, donor reports and reports provided by Drs Herbst and Lamb-Parker, and interviews with programme staff and parents conducted in June 2011.

Did PSP reach its intended targets?

At the outset of each project cycle, Ntataise was successful in enrolling preschool matrons to run the PSP.

- About half (51%) of its intended target group of parents with children in preschool was enrolled over the two cycles.

So Ntataise did reach its intended beneficiaries, but only half those specified in the proposal to the donor. One reason for this is that Ntataise decided to exclude parents who were working at the time of enrolment and this would have impacted on reach at start up.

Was PSP delivered as intended?

The PSP programme theory is that providing information about the importance of early brain development, practical skills and an opportunity for sharing with their peers in a safe, nurturing environment enables parents to extend ECD into the home as well as to be more supportive and cooperative of the preschool. Part of the programme was developed from a component of a tried and tested international intervention, and other aspects of it had previously been piloted in Rammulotsi. A clear manual including instructions for each workshop was available and matrons received training as well as support from the programme manager for delivery of the workshops.

While the PSP concept has much merit, experience in PSP has been that it was a considerable challenge to deliver the programme as intended. In 2009:

- There was considerable variation in PSP delivery across the schools. Only one school reportedly delivered all ten workshops.
- Major problems were experienced with retention of the preschool matrons who were recruited to run the programme (workshops were held on weekdays).
- In addition, Ntataise reported that the programme experienced high attrition and poor programme attendance.



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- In 2010, in spite of attempts to improve the engagement of the preschool matrons who ran PSP, 50% (7) of the pre-schools had withdrawn from the programme by about half way.
- Ntataise reported that there was an average 64% attendance at the first workshops of the year. Thereafter attendance steadily decreased to less than 27% attendance for workshops 5 to 10.
- Of the 106 registered parents who registered in 2010, the average participation by parents was four sessions (40%) and, only 20 participants attended 7 or more sessions (the number estimated by the programme designer to be necessary to have impact).

In sum, while initial enrolment may have been encouraging, very few people actually received the amount of exposure to PSP that was likely to change the manner in which they engaged with their children. In consequence, far lower numbers of parents and children than estimated in the Ntataise proposal to DG Murray would have benefited.

There are a number of reasons for this situation as provided by programme staff and participants.

In her report to the M&E team (December, 2010), Dr Lamb-Parker stated that:

'the matrons found it difficult to implement the workshops due to the demands of their administrative positions as directors, demands of teaching, various barriers to parents' participation (e.g., illness, competing plans), specific project criteria (i.e. 4-5 year olds not in PSP last year for purposes of the evaluation design), competing professional development demands (Level 5 classes), and some difficulties related to the need for more training. The need for more training to facilitate the brain development sessions was also noted.'

However, she also notes positive responses from matrons:

'Regardless of these difficulties, all but one matron wants to conduct the workshops with parents next year because 1) they felt that the knowledge gained was important for parents' relationships with their children, 2) the workshops are a vehicle for them to gain parents' trust and support them, and 3) the training and experience gave them added professional and personal experience and satisfaction.'

These matters were explored further in interviews with programme staff and focus groups with programme recipients (the latter were selected by Ntataise and not the M&E team).

Ntataise programme staff commented that because the workshops were offered mid-week and in the middle of the working day, it was restricted to non-working parents. But non-working parents also had many calls on their time.



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'The drop-off of parent/caregiver attendance of workshops is largely due to parents/caregivers finding work. Those parents/caregivers who found work were unable to attend the workshops that were held during their working hours. To encourage regular participation, parents/caregivers were told they would receive a certificate of attendance for eight workshops. However when parents/caregivers realised they would not achieve attendance of eight sessions they dropped out of the programme.'

Clearly regular participants claimed to have benefited from the programme:

'Despite the significant drop-off in parents/caregivers numbers at workshops, those parents/caregivers that did attend workshops regularly have reported that they are using the learning games at home with their children.'

Comments from programme staff may shed some light on other reasons that workshops were not taken up – firstly, there does not appear to be a culture of parent involvement in children's education in this community:

'Most parents, especially those who are educated, blessed with a good job and can afford preschool, pass the responsibility of their children's education to the schools and teachers. If they had it their way the school will be open 24 hours/365 days.'

This was reinforced by matrons who indicated that they were struggling to engage parents as active partners of their crèches or with children's educational development.

In general parents rarely attend meetings and it is hard to have a functional school governing body. So matrons tended to see the primary goal for the programme as being to get parents more active in meetings, fundraising, support and maintaining infrastructure and then secondly to assist children's educational development.

In this climate external incentives such as food offered at workshops were important and when food was not offered programme staff noted that attendance dropped. Parents who did attend suggested that they should receive certificates and possibly payment.

Matrons mentioned that they particularly targeted parents of children who were neglected or did not do their homework or developed slowly or did not seem interested as well as those who were more accessible. It is likely the first category would be extremely difficult to engage. At least one matron commented that parents felt that their parenting skills were being questioned.

Secondly, regarding the workshops themselves, the programme facilitator noted that matrons often passed the responsibility to teachers who are not trained to facilitate workshops:

'I think that matrons and teachers have enough to deal with as it is, and that might compromise the level of quality and commitment they invest in the programme.'



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Matrons themselves raised the issue of incentives, such as payment for doing the sessions, certificates as well as a full pack of prepared training material.

Dr Lamb Parker's focus group notes indicate that younger parents were less interested than older ones, suggesting a need for a different approach for teen parents.

The psychosocial support of the listening and sharing sessions was seen by the programme facilitator, matrons and parents to be especially valuable. Matrons said that it created a support network; parents no longer felt alone; it was a beacon of hope. Parents said that it was fun, they laughed in the groups which reduced their stress and felt better after sharing and discussing challenges and problems.

But parents also focused on the way that it changed their parenting helping them to provide intellectual stimulation, help with homework and improved their child management skills.

'You see I am a better mother. I would not want to be disturbed when it is time for Generations (TV soapie) but now my child comes first and everything else thereafter'.

Another parent commented that she had gained an understanding of how to reinforce education through play and now realised how indigenous games like *diketo* and *kgati* develop children's skills.

While matrons indicated several challenges with implementing the programme it did provide opportunities for their personal development. Those interviewed by Dr Lamb Parker (but not by an independent field worker) said that they had gained confidence through presenting to parents and several referred to improved relationships with parents after the sharing groups, which could encourage further participation.

PSP Conclusion and Recommendations

It is clearly the case that it was challenging to implement PSP in this community.

- In spite of considerable effort, reach was poor and a very small proportion of those enrolled are likely to have been sufficiently exposed to the programme to have benefitted as intended.
- Those that did, found the psychosocial support aspects of the programme to have been particularly helpful.

The key reasons for what unfortunately amounts to programme failure (except for a few beneficiaries), appear to be:

- barriers to implementation experienced by the *preschool matrons* whose other duties and lack of an incentive made it difficult for them to implement PSP (or did not motivate them sufficiently), and,



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- *parent attrition and poor attendance* which can be ascribed in the main to their receiving employment opportunities that prevented their attendance.

If Ntataise wishes to continue offering this programme, it is essential that the challenges revealed over the past two years are addressed. If this does not happen, one must seriously question the wisdom of running the intervention when so few benefit despite considerable effort and cost.

At the very least, Ntataise is advised to consider the extensive set of recommendations for improved deliver of PSP provided by Dr Lamb-Parker to Ntataise if they wish to continue this programme. Central among them are the following:

- Improve incentives for parents to attend;
- Provide incentives for matrons, including stipends;
- Run the PSP at times that are mutually acceptable to matrons and parents;
- Make sure that those delivering the programme are appropriately trained and ensure regular professional supervision;
- Adjust the programme content and ensure that all materials are in both English and SeSotho;
- Enhance programme fidelity by having good oversight of delivery, and develop appropriate measures of parents' ability to demonstrate what they have learnt in home-based assessments.

NTATAISE ENRICHMENT PROGRAMME (NEP)

This section of the report commences with a description of the NEP, discusses participation rates and then the outcomes for enrichment of preschools. The section concludes with findings on implementation and recommendations.

NEP Description

The NEP is a well-established intervention designed to improve the quality of the ECD centre learning programme and increase the school-readiness of children. It is focused on classes for 3 – 5 year olds. The programme provides follow-up support and guidance for preschool teachers who have completed Level 4 training.

The programme consists of monthly workshops and at least one quarterly full-day demonstration visits to the preschools.

The workshops presented a monthly theme around which activities could be structured e.g. My family; Seasons; Food. The demonstration visits focus on improving practitioners' teaching practice. In the classroom, the experienced Ntataise trainer models well structured, planned ECD activities with a literacy and numeracy focus, In addition,



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educational toys and other teaching materials are provided to each preschool. Training in the use of this equipment is provided. Ntataise Learner Agreement Forms are completed by participants, preschool supervisor and Ntataise in order to obtain their commitment to the programme. Attendance registers are kept and the Facilitator compiles reports on the sessions.



A community preschool in Rammulotsi.

NEP outcomes

Schools were enrolled in Rammulotsi, Odendaalsrus and Henneman. Enrolment targets are depicted in Table 7.

Table 7: Ntataise Enrichment Programme Targets

	Direct targets*	
	Children whose teachers participated in the NEP	Preschool teachers
Year 1: 2008	375	15
Year 2: 2009	375	15
Year 3: 2010	375	15
Year 4: 2011	375	15
TOTAL	1 500	60

*Notes: * Targets derived from the Ntataise Proposal. + Ntataise argued that 'there will be an ongoing impact from practitioners from each previous year which will reach far more than 1 500 children.'*

Did the Ntataise Enrichment programme reach its targets?

The evaluation only covers two years.

- Enrolment of teachers is almost on target, and the NEP reached the targeted child beneficiaries in 2010 (figures are not available for 2009).



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- In 2009, **14** teachers from **15** preschools in Rammulotsi enrolled in the programme. The number of children who benefit is not recorded.
- In 2010, **14** teachers from **14**²⁰ preschools participated. There were 347 children in these classes.
- A total of 28 teachers would have benefited from the NEP.

Did the Ntataise Enrichment programme improve the classroom environments of preschools?

As was the case for other partners, three scales from the ECERS-R were used to measure change in the child's early learning and stimulation environment following the NEP.

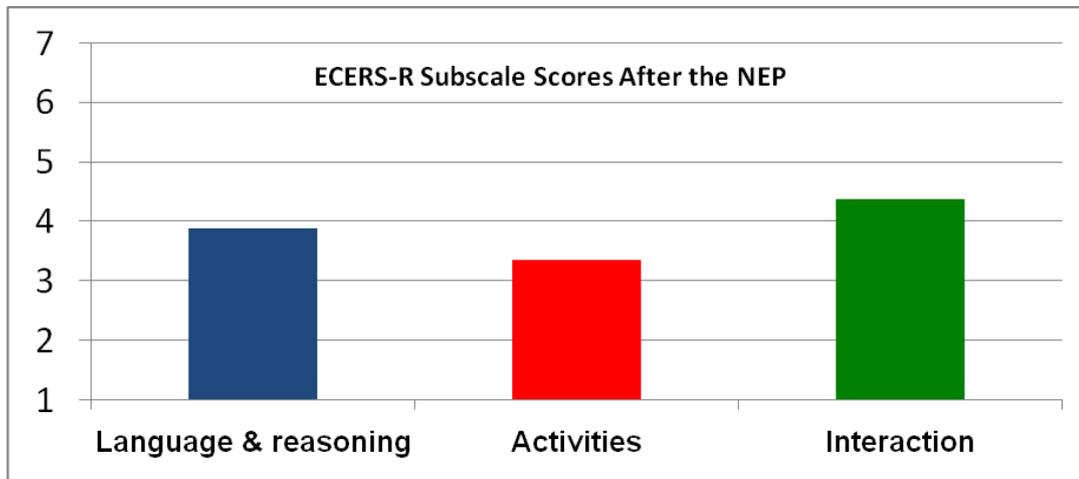
Unfortunately Ntataise failed to collect baseline and follow-up data using the Early Childhood Environment Rating Scales Revised (ECERS-R) in 2009. However, they did use their own tools.

In 2010, the programme was run in schools outside Rammulotsi with which Ntataise had not worked on previous occasions. The NEP trainer was instructed in the use of the Early Childhood Rating Scale-R. As was the case for other partners, three scales from the ECERS-R were used to measure change in the child's early learning and stimulation environment following the NEP. Fourteen teachers and their classrooms were assessed. Problems were encountered with the baseline data. It was observed that the baseline scores were extremely low on all subscales (mostly 1 on a scale of 1-7 which is unlikely). Follow-up scores in contrast were so high as to suggest overscoring.

The M&E team regarded both the baseline and follow-up scores as unreliable. We discarded the baseline scores and requested re-rating of a sample of 4 classrooms by an independent assessor. We found that these assessments yielded much more realistic scores which were used to prorate all the scores of classes assessed. Follow-up data is presented in Figure 6 for fourteen preschool classrooms.



Figure 7: Ntataise Enrichment Teacher Training Programme: effects on classroom quality



As there is no baseline data, we cannot quantify the degree of change as a result of the intervention.

However:

- the assessed classrooms are offering the children an early learning environment that is within the Minimum Quality range on the ECERS-R. This means that they fall within the adequate standard in the Guidelines for ECD Services which is an encouraging level of quality.

While educational equipment clearly makes it easier to implement a good learning programme and was the incentive to join the programme for some practitioners, the focus group participants focused a lot more on skills they had gained. These included learning to plan, to assess children, to engage children through different methods and make allowance for different learning styles, and to manage their work and relationships more easily.

One practitioner commented that:

'People who visit my centre, look at my classes, the pictures on the walls, class layout and the weekly and monthly plan, and they start asking about where I learned all that.'

The trainer reported that the equipment made a significant change to implementation but also that the programme enabled practitioners to use their own initiative, take control and believe in themselves. Interaction with children and discipline improved significantly.



Reflections on the NEP implementation

Data Sources

Data sources for this section of the report are drawn from the common data sheet compiled by Ntataise, M&E reports, reports to the donor, records of meetings with Ntataise staff conducted over the period of the evaluation, and interviews with programme staff and beneficiaries conducted in June 2011.

Did the NEP reach its intended targets?

- The answer is yes.
- The number of practitioners reached in the NEP in 2009 and 2010 is close to the target set by Ntataise.
- The number of children benefitting is also likely to be within the range proposed.

Ntataise stringently applied the entry requirement of a recognised basic training qualification. When consulted, the NEP trainer indicated this made her facilitation role easier as she did not have to focus on content but rather on demonstrating the skills needed for effective implementation of the ECD programme.

In a focus group interview, practitioners commented on how the NEP helped them with practical implementation:

'It provides us with hands on training compared to a theoretical based training I received from the college';

'Ntataise helped me to be a good teacher, I have a plan, I understand the themes..., I don't just teach, I also demonstrate, I mean I did not know about that prior to enrolling for this programme.'

Another practitioner commented that her centre was attracting more learners because the parents could see that they take teaching seriously.

Was the NEP delivered as intended and what were the enablers and challenges in regard to this?

This is a mature programme. Quality assurance systems were in place at the start to ensure that the NEP would be delivered as intended. Sessions are manualised and delivered by an experienced ECD facilitator who has worked with children as well as adults. Oversight and monitoring visits to sites were undertaken by Dr Herbst. A baseline needs assessment prior to the intervention helped provide focus.

Programme delivery staff indicated that the provision of educational toys and books was invaluable as an aid to the practitioners delivering the programme. They also stressed the need for a small group of trainees to maintain the quality of the input. Certainly,



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larger groups would reduce the time available for on-site support and several practitioners requested more frequent visits.

With regard to take up of the programme the trainer noted the importance of contracting with both the supervisor (matron) and practitioner. She felt that this could be further strengthened as there were difficulties when matrons were not supportive:

'You won't believe this but every time the matrons are among the stumbling blocks to effective implementation. If matrons don't understand the idea for the weekly plan, they shoot it straight to the ground.'

She attributed this to insecurity and power plays and indicated that there needs to be a focus on empowering matrons as well as practitioners to minimise competition and encourage interdependence and support.

Having a site based intervention improves take up of training. It is less costly for practitioners and easy to organise.

Finally, a challenge for some of the practitioners was that the materials are in English and not in the vernacular and the trainer felt they should be available in both.

NEP conclusion and recommendations

- The available (although limited) evidence suggests that the enrichment programme is effective in improving teaching practice and classroom quality and strengthens calls for improved on-site support to improve ECD quality. It would be useful for Ntataise to undertake a follow-up post the intervention so see whether quality is maintained in the absence of ongoing contact. It is possible that the visits of the trainer motivate the practitioners to make the necessary efforts and that these will fall away when she is no longer involved.
- Finally, the NEP should be costed. The type of support while no doubt necessary to improve quality, is fairly intensive. It requires an experienced trainer and equipment. An exploration of the average number and spacing of visits to achieve effects would also be useful.

IMPACT OF THE NEP AND MOSUPATSELA PLAYGROUPS AT GRADE R

As with the other partners involved in Sobambisana, programme impact was assessed in Grade R during the first term of 2011. In the case of Ntataise, the following groups were compared:

- Children who had had no exposure to ECD (n = 36);
- Children who had participated in Mosupatsela playgroups (n = 23);



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- Children who had attended a preschool at which practitioners had been trained by Ntataise (n = 28).

Statistical analyses shows that²¹:

- Before controlling for age, the results indicate that children who have attended a preschool outperform the other two groups on Language, Cognition, Counting and Resilience. However, when age differences are controlled the, and while the children who have been in ECD perform best, the result is no longer statistically significant. The finding nonetheless indicates the potential of preschool for enhancing developmental outcomes.

It is probably most realistic to compare the Mosupatsela children with those who had had no ECD. This is because there is likely to be a selection effect operating in the case of those who attended preschools (the NEP group). Their parents could afford to send them to preschool and if that is the case, may have been able to provide other advantages at home not shared by the two other groups. Data was not available to permit a comparison between the three groups on factors in their home backgrounds would have contributed to their early development.

It must be stressed that this is a cross-sectional study at one point in time (we do not have baseline scores for all the groups assessed).

The findings are promising for both the NEP and Mosupatsela groups in some areas. Confirmation would require further investigation in a longitudinal study.



STATISTICAL APPENDIX

1: Motsupatsela Programme

1.1. Statistical Summary Cognition: Independent Samples t Test significant, $t(43) = -2.064$, $p < .05$; Vocabulary: Independent Samples t Test not significant, $t(49) = -1.965$, $p > .05$. Children who attended more than 50% of the sessions made more than two thirds of the gains experienced by those who attended less than 50%.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-14 sessions	38	33.3	48.1	48.1
	15-27 sessions	41	36.0	51.9	100.0
	Total	79	69.3	100.0	
Missing	System	35	30.7		
Total		114	100.0		

Group Statistics

		N	Mean	Std. Deviation	Std. Error Mean
Grover_Difference	dimen 1-14 sessions	22	9.8409	7.76038	1.65452
	sion1 15-27 sessions	23	16.1304	12.10674	2.52443
Vocab_Difference	dimen 1-14 sessions	23	8.8261	6.22058	1.29708
	sion1 15-27 sessions	28	12.0357	5.43979	1.02802

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. 2-tailed	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Grover_Difference	Equal variances assumed	5.676	.022	-2.064	43	.045	-6.28953	3.04710	-12.43458	-.14447
	Equal variances not assumed			-2.084	37.677	.044	-6.28953	3.01831	-12.40149	-.17756
Vocab_Difference	Equal variances assumed	.008	.930	-1.965	49	.055	-3.20963	1.63313	-6.49153	.07228
	Equal variances not assumed			-1.939	44.131	.059	-3.20963	1.65507	-6.54492	.12566

1.2. Statistical Summary Cognition: Chi2 Test significant: $\text{Chi}^2(1, N = 54) = 14.579$, $p > .001$. More children were within the norm for their age after the intervention than expected by chance.



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Grover Baseline_Norm * Grover FollowUp_Norm Crosstabulation

			Grover Follow Up Norm	Grover Follow Up Norm	
			Not within Norm Grover	Within Norm Grover	Total
Grover Baseline_Norm	Not within Norm Grover	Count	28	13	41
		% within Grover Baseline_Norm	68.3%	31.7%	100.0%
		% within Grover Follow Up Norm	96.6%	52.0%	75.9%
	% of Total		51.9%	24.1%	75.9%
	Within Norm Grover	Count	1	12	13
		% within Grover Baseline_Norm	7.7%	92.3%	100.0%
% within Grover Follow Up Norm		3.4%	48.0%	24.1%	
% of Total		1.9%	24.1%	24.1%	
% of Total		53.7%	46.3%	100.0%	
Total	Count	29	25	54	
	% within Grover Baseline_Norm	53.7%	46.3%	100.0%	
	% within Grover Follow Up Norm	100.0%	100.0%	100.0%	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	14.579 ^a	1	.000		
Continuity Correction ^b	12.244	1	.000		
Likelihood Ratio	16.292	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	14.309	1	.000		
N of Valid Cases	54				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.02.

b. Computed only for a 2x2 table

Regression on Cognitive Development

1.3. Statistical Summary: Cognition (Grover): a) Multiple Regression with Baseline cognitive score excluded: $F(4,34) = 5.73$, $R^2 = .333$, $p < .01$ (age, weight for height and weight for age are significant predictors of cognitive scores at follow-up). b) Multiple Regression with Baseline cognitive score included: $F(5,31) = 9.64$, $R^2 = .546$, $p < .001$ (Only Baseline cognitive score predicts cognitive score at follow-up).



	Grover Follow Up Score (excluding Grover Baseline)		Grover Follow Up Score		Grover Follow Up Score (weight removed)	
Model fit:	F (4,34) = 5.73, R ² =.333, p = .00*		F (5,31) = 9.64, R ² =.546, p = .00*		F (4,32) = 11.81, R ² =.546, p = .00*	
Variable	Coefficient	P	Coefficient	P	Coefficient	p
Constant	-3.89	.83	-3.50	.80	-8.94	.49
Age at Baseline	10.52	.01*	6.52	.06	7.08	.04**
Z-score Underweight Follow Up	-7.85	.04**	-3.19	.32	-	-
Z-score Stunted Follow Up	11.58	.00*	5.44	.11	2.57	.15
Grover Baseline	-	-	.615	.00*	.66	.00*
Child Attendance	-.61	.07	-.26	.393	-.14	.61

NOTES: * Significant at the 0.01 level (2-tailed). ** Significant at the 0.05 level (2 tailed).

Regression on Language Development

1.4: Statistical Summary: Language: a) Multiple Regression with Baseline language score excluded: F (4,34) = 6.00, R²=.345, p <.001 (weight for height and weight for age are significant predictors of cognitive scores at follow-up). b) Multiple Regression with Baseline language score included: F (5,33) = 15.08, R²=.649, p <.001 (Only Baseline language score predicts language score at follow-up).

	Vocabulary Follow Up Score (excluding Vocabulary Baseline)		Vocabulary Follow Up Score		Vocabulary Follow Up Score (weight removed)	
Model fit:	F (4,34) = 6.00, R ² =.345, p = .00*		F (5,33) = 15.08, R ² =.649, p = .00*		F (4,34) = 13.94, R ² =.577, p = .00*	
Variable	Coefficient	P	Coefficient	P	Coefficient	p
Constant	25.42	.02**	15.52	.06	5.41	.49
Age at Baseline	4.32	.084	.34	.85	1.43	.49
Z-score Underweight Follow Up	-6.87	.00*	-4.94	.08	-	-
Z-score Stunted Follow Up	8.15	.00*	4.58	.19	.187	.86
Vocabulary Baseline	-	-	.77	.00*	.859	.00*
Child Attendance	-.43	.497	0.29	.85	.193	.23

NOTES: * Significant at the 0.01 level (2-tailed); **. Significant at the 0.05 level (2 tailed).



2: Impact at Grade R

Statistical Summary: Before controlling for age, the results indicate that children who have attended a preschool outperform the other two groups on Language, Cognition, Counting and Resilience {ANOVA controlling for age: Counting: $F(2,87) = 3.95, p = .023$; Peabody: $F(2,87) = 3.20, p = .045$; Grover: $F(2,87) = 4.09, p = .020$; SACAS Resilience: $F(2,74) = 3.43, p = .038$ } However when age differences are controlled the, and while the children who have been in ECD perform best, the result is no longer statistically significant.

COUNTING

Between-Subjects Factors^a

	Value Label	N
Group 2	Comparison Group No ECD	36
Group 3	Teacher Training Group	28
Group 4	Playgroup	26

Descriptive Statistics^a

Dependent Variable: Counting:Herbst Measure

Group	Mean	Std. Deviation	N
Comparison Group No ECD	4.1389	1.35547	36
Teacher Training Group	4.9286	.60422	28
Playgroup	4.3462	1.23101	26
Total	4.4444	1.17187	90

Tests of Between-Subjects Effects^c

Dependent Variable: Counting:Herbst Measure

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^b
Corrected Model	13.398 ^a	3	4.466	3.529	.018	.110	10.588	.766
Intercept	6.266	1	6.266	4.952	.029	.054	4.952	.595
AGE_Testing	3.223	1	3.223	2.547	.114	.029	2.547	.351
Group	6.438	2	3.219	2.544	.084	.056	5.087	.496
Error	108.824	86	1.265					
Total	1900.000	90						
Corrected Total	122.222	89						

a. R Squared = .110 (Adjusted R Squared = .079)

LANGUAGE

Between-Subjects Factors^a

	Value Label	N
Group 2	Comparison Group No ECD	36
Group 3	Teacher Training Group	28
Group 4	Playgroup	26



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Descriptive Statistics^a

Dependent Variable: Peabody Actual Score

Group	Mean	Std. Deviation	N
Comparison Group No ECD	45.7222	5.42276	36
Teacher Training Group	48.5000	4.76484	28
Playgroup	48.6154	5.34473	26
Total	47.4222	5.33165	90

Tests of Between-Subjects Effects^c

Dependent Variable: Peabody Actual Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^b
Corrected Model	252.616 ^a	3	84.205	3.180	.028	.100	9.540	.717
Intercept	1356.431	1	1356.431	51.223	.000	.373	51.223	1.000
AGE_Testing	79.037	1	79.037	2.985	.088	.034	2.985	.401
Group	121.463	2	60.731	2.293	.107	.051	4.587	.454
Error	2277.340	86	26.481					
Total	204928.000	90						
Corrected Total	2529.956	89						

a. R Squared = .100 (Adjusted R Squared = .068)

COGNITION

Between-Subjects Factors^a

Group	Value Label	N
2	Comparison Group No ECD	36
3	Teacher Training Group	28
4	Playgroup	26

Descriptive Statistics^a

Dependent Variable: Actual Grover Score

Group	Mean	Std. Deviation	N
Comparison Group No ECD	33.5556	16.72884	36
Teacher Training Group	44.7857	12.60910	28
Playgroup	39.0769	16.85686	26
Total	38.6444	16.14005	90



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Tests of Between-Subjects Effects^c

Dependent Variable: Actual Grover Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^b
Corrected Model	2944.337 ^a	3	981.446	4.170	.008	.127	12.510	.839
Intercept	47.138	1	47.138	.200	.656	.002	.200	.073
AGE_Testing Group	951.164	1	951.164	4.041	.048	.045	4.041	.511
Error	1158.995	2	579.497	2.462	.091	.054	4.925	.483
Total	20240.285	86	235.352					
Corrected Total	157590.000	90						
Total	23184.622	89						

a. R Squared = .127 (Adjusted R Squared = .097)



ENDNOTES

- 1 347 children were recorded for 2010; no figures were presented to the M&E team for 2009.
- 2 Barnes, H., Wright, G., Noble, M., & Dawes, A. (2007). The South African Index of Multiple Deprivation for Children (SAIMDC): Census 2001. Cape Town: HSRC Press.
- 3 Barnes, H., Wright, G., Noble, M., & Dawes, A. (2009). The South African Index of Multiple Deprivation for Children (SAIMDC): Census 2001at Datazone Level. Pretoria: Department of Social Development.
- 4 Ntataise (2010). Come and Play Programme Plan and Toy Guide. Note while the manual is dated 2010, it was available for the 2009 programme cycle.
- 5 In their report to the M&E team presented in June 2011, Ntataise state that the Mosupatsela programme is 'specifically designed to get them school ready within 40 one-hour playgroups' (p.3). According to records provided by Mosupatsela, in the period 2009-2010 the maximum numbers of sessions provided was 27.
- 6 Walker, S. P., Wachs, T. D., Meeks Gardner, J., Lozoff, B., Wasserman, G. A., Pollitt, E. et al. (2007). Child development: risk factors for adverse outcomes in developing countries. The Lancet, 369, 145-157.
- 7 See Sobambisana Measures Appendix.
- 8 Labadarios, D. (2007). National Food Consumption Survey-Fortification Baseline (NFCS-FB): South Africa, 2005. Pretoria: Directorate: Nutrition, National Department of Health. National Stunting Rate 1-3yrs = 23.4%; 4-6yrs = 12%; Underweight Rate: 1-3yrs = 11%; 4-6yrs = 8%; Rural Stunting Rate < 9 = 20%; Rural Under-weight Rate < 9 = 8%).
- 9 Splitting the sample in this way does reduce statistical power. However, it is a common way of testing whether dose increases the odd of change and was preferred in this evaluation.
- 10 Human Sciences Research Council (2000). Report on the Grover Counter Scale of Cognitive Development. Pretoria: Human Sciences Research Council.
- 11 Shipley, K. and McAfee, J.G. (1992) Assessment in speech-language pathology. San Diego: Singular Publishing.
- 12 Statistical Summary: Cognition: Independent Samples t Test significant, $t(43) = -2.064$, $p < .05$; Vocabulary: Independent Samples t Test not significant, $t(49) = -1.965$, $p > .05$. See Statistical Appendix for details.
- 13 Statistical Summary: Chi2 Test significant: $\text{Chi}^2(1, N = 54) = 14.579$, $p > .001$. See Statistical Appendix for full details.
- 14 Statistical note: Odds Ratio less than 50% sessions vs more than 50% sessions = 1.53 (Confidence Interval 95%). Odds Ratios are appropriate for categorical data.
- 15 Statistical note: Standardised Mean Difference (SMD) is the appropriate technique for continuous data. Average change in language scores for children attending < 5% sessions = 8.82; Average change of those attending > 50% sessions = 12.03. SMD = 0.55. (Confidence Interval 95%).
- 16 Statistical Summary: a) Multiple Regression with Baseline cognitive score excluded: $F(4,34) = 5.73$, $R^2 = .333$, $p < .01$ (age, weight for height and weight for age are significant predictors of cognitive scores at follow-up). b) Multiple Regression with Baseline cognitive score included: $F(5,31) = 9.64$, $R^2 = .546$, $p < .001$ (Only Baseline cognitive score predicts cognitive score at follow-up).
- 17 Statistical Summary: a) Multiple Regression with Baseline language score excluded: $F(4,34) = 6.00$, $R^2 = .345$, $p < .001$ (weight for height and weight for age are significant predictors of cognitive scores at follow-up). B) Multiple Regression with Baseline language score included: $F(5,33) = 15.08$, $R^2 = .649$, $p < .001$ (Only Baseline language score predicts language score at follow-up). See Statistical Appendix for details.



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¹⁸ Evans, J. (2006). Parenting programmes: an important ECD intervention strategy. Background paper prepared for the Education for all Global Monitoring Report 2007 Strong Foundations: early childhood care and education. Paris: UNESCO.

¹⁹ <http://www.fpg.unc.edu/~abc/>

²⁰ Child classroom enrolment is only available for 2010 (December 2010 M&E Report).

²¹ Statistical Summary: {ANOVA controlling for age: Counting: $F(2,87) = 3.95, p = .023$; Peabody: $F(2,87) = 3.20, p = .045$; Grover: $F(2,87) = 4.09, p = .020$; SACAS Resilience: $F(2,74) = 3.43, p = .038$ } ANCOVA not significant. See Statistical appendix for details.