

THE UNLIMITED Child

Unlimiting Dreams Together



Independent Study

ELPO Summary

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Background to the Early Learning Programme Outcome Study

Purpose of the Study

The Early Learning Programme Outcome (ELPO) Study was undertaken to investigate the quality of ECD programmes in South Africa. The primary aim of the study was “to compare the extent to which different types of early learning programmes improve early learning outcomes, as measured by the Early Learning Outcomes Measure (ELOM)”.¹

Five ECD programmes were included in the study, one of which was The Unlimited Child's ECD centre development programme.

Funding of the Study and Early Learning Outcomes Measure (ELOM) Tool Development

The study was commissioned by Innovation Edge and Ilifa Labantwana. Innovation Edge is a grant making and investment fund interested in finding solutions to ECD and education challenges in poorly resourced communities.² Ilifa Labantwana is a National Donor Partnership that aims to increase access to quality ECD in South Africa.³

Innovation Edge also funded the development of the ELOM. (The Anglo American Chairman's Fund Trust and ApexHi Charitable Trust have subsequently committed funding towards the ongoing development of the tool.²)

The ELOM was designed by four subject experts specialised in ECD theory, ECD programme development and implementation, Monitoring and Evaluation (M&E) and psychometric testing.² These experts, with the addition of one other, also conducted the ELPO Study.

The Early Learning Outcomes Measure (ELOM)²

The ELOM is South Africa's first population level pre-school child assessment tool. It was developed with the contextual factors of the country's ECD landscape in mind, controlling for cultural and socio-economic circumstances and designed for administration by trained persons with a background in ECD. Cost and time required for administration were key factors taken into consideration. Consequently, the ELOM is inexpensive and can be administered in approximately 45 minutes.

The ELOM is aligned with the National Early Learning Development Standards (NELDS) that outline desired age-appropriate competencies and expected learning achievements for young children.⁴ The ELOM measures early learning on five developmental domains⁵:

¹ Dawes, A., Biersteker, L., Girdwood, L., Snelling, M. and Horler, J. (2019). Early Learning Programme Outcomes Study Technical Report. Claremont Cape Town: Innovation Edge (www.innovationedge.org.za) and Ilifa Labantwana (www.ilifalabantwana.co.za).

² <http://elom.org.za/who-we-are/>

³ <http://ilifalabantwana.co.za/about/what-we-do/>

⁴ https://www.unicef.org/southafrica/resources_16275.html

⁵ <https://ilifalabantwana.co.za/elom-a-programme-monitoring-and-evaluation-tool/>

1. Gross Motor Development
2. Fine Motor Coordination And Visual Motor Integration
3. Emergent Numeracy And Mathematics
4. Cognition And Executive Functioning
5. Emergent Literacy And Language

Research indicates that these domains are most important for coping in Grade R and that they are good predictors of later school success.⁶

Whilst the ELOM tool is not a school readiness assessment, ELOM results highlight early learning achievements and thus provide a good indication of the quality and effectiveness of the early learning programmes to which children are exposed.

Overview of the Unlimited Child Pre-Grade R Model

The Unlimited Child (TUC) pre-Grade R model is focused on improvement in the quality of early learning services offered at ECD centres.

Training

Implementation of the TUC model begins with a five-day training programme that includes ECD theory and policy frameworks; introduction of the TUC toy kit and practical ways in which toys can be used in the classroom; explanation of the roles of ECD staff and TUC monitors; and expectations of the provision of feedback and assessment requirements. Both ECD centre supervisors and practitioners are required to attend this training.

Provision of Resources and Materials

ECD centres are provided with an age-appropriate educational resource kit, consisting of learning materials, toys and other resources, once they have completed the training. This kit is curriculum-aligned. The TUC Practitioner's Guide, which consists of 36 weeks of daily plans, is also supplied.

Ongoing Mentoring and Support

Monthly cluster meetings to promote ongoing learning are facilitated by TUC trainers and monitors and attended by ECD centre staff located in a specific area. Monitors provide further support by conducting monthly site visits, which are approximately two hours in length. TUC monitors are required to have a minimum of NQF level 4 ECD training as well as two years of practical experience at an ECD centre. They receive a stipend.

Assessment

Data is collected for monitoring and evaluation purposes and child assessments are conducted at multiple intervals throughout the year. TUC uses an electronic information management system.

⁶ <https://ilifalabantwana.co.za/elom-a-programme-monitoring-and-evaluation-tool/>

Early Learning Programme Outcome (ELPO) Study Overview

Research Questions

The two main research questions the ELPO study sought to answer were⁷:

1. How do different early learning interventions, targeting three- to five-year-old children from low-income backgrounds, vary in their effectiveness in preparing children for Grade R (as measured by the ELOM)?
2. What programme, child, and home environment factors predict changes in ELOM scores following exposure to an early learning programme?

The study examined five ECD programmes, three of which were playgroup models and two ECD centre development models. A summary of the five programmes and their key features is included in Table 1.

Study Design

The ELOM was administered in March 2018 and again in November 2018 (a pre-test post-test design) to 369 matched children in order to measure early learning progress on the five developmental domains. ECD practitioners and children's caregivers were interviewed at endline (in November 2018) in order to obtain data on programmatic (quality) and home environment (child stimulation) factors that could affect learning outcomes.

Note: Sampling, data collection measures and procedures, and the analytical approach are not discussed in this summary report, which is focused on the study findings. Please refer to the comprehensive report for this information.

Predictors of Change

The following variables, which were considered to be predictors of the change in ELOM scores over time, were used in the study:

Child Variables

- Age
- ELOM Scores
- Programme Exposure (Total Sessions Attended)
- Years in the Programme
- Height for Age

Programme Variables

- Programme (Organisation)
- Child to Practitioner Ratio

⁷ Dawes, A., Biersteker, L., Girdwood, L., Snelling, M. and Horler, J. (2019). Early Learning Programme Outcomes Study Technical Report. Claremont Cape Town: Innovation Edge (www.innovationedge.org.za) and Ilifa Labantwana (www.ilifalabantwana.co.za).

- Practitioner Satisfaction with Resources
- Practitioner Satisfaction with Support
- Practitioner Experience
- Practitioner ECD Qualifications

Home Learning Environment Variables

- Caregiver Education
- Home Learning Opportunity
- Home Learning Resources (Books and Toys)
- Quintile (Socio-Economic Indicator)

Table 1: Key Programme Features.⁸

Organisation	Study Region	Programme Type	Parent Component	Home Visitation	Nutrition	Practitioner ECD Qualifications	Cost	Sessions per Week	Total Programme Exposure (Hours per Week)
Cotlands	Macassar, Western Cape Lydenburg, Mpumalanga	Playgroup	No	No	Breakfast and snack	Level 4	Free	2	8
Lesedi	Mangaung, Free State	Playgroup (mobile model)	Yes, weekly formal	Yes, to vulnerable parents	Snack	Level 4	Free	1	2.5
LETCEE* (SmartStart)	Greytown, KwaZulu Natal	Playgroup (franchise model)	Yes	Yes, to vulnerable parents (and those who don't attend parenting sessions)	Fortified porridge	SmartStart 5 day training and accreditation if rated 'green'; some Level 4	Free	2	6
Ntataise	Viljoenskroon, Free State Bothaville, Free State	ECD Centre	No	No	Provided by centre	Formal ECD qualifications	Fees and subsidies	5	22.5
The Unlimited Child (TUC)	Ethekwini District (Umlazi and KwaNyuswa), KwaZulu Natal	ECD Centre	No	No	Provided by centre	Formal ECD qualifications	Fees and subsidies	5	15 - 22.5

*Little Elephant Training Centre fro Early Education (LETCEE)

⁸ Adapted from: Dawes, A., Biersteker, L., Girdwood, L., Snelling, M. and Horler, J. (2019). Early Learning Programme Outcomes Study Technical Report. Claremont Cape Town: Innovation Edge (www.innovationedge.org.za) and Ilifa Labantwana (www.ilifalabantwana.co.za).

Summary of Study Findings

Effectiveness of ECD Interventions (as Measured by the ELOM)

The findings indicated that all programmes contributed to an improvement in total ELOM scores. The Cotlands playgroup programme and the TUC centre programme elicited significantly greater improvement than the other programmes.

The study indicates that children who obtain low baseline ELOM scores are expected to improve more than children who score higher at baseline, which was true for TUC children. (The study was not able to determine the reasons for differing programme baseline scores). Table 2 shows the effect of early learning programmes on ELOM total scores.

Table 2: Change in Average ELOM Total Scores per Programme⁹.

Programme	Baseline	Endline	Extent of Change
Cotlands	32.6	52.6	20.0
Lesedi	36.9	50.1	13.2
LETCEE(SmartStart)	33.9	47.7	13.8
Ntataise	49.8	66.9	17.1
The Unlimited Child (TUC)	37.8	61.5	23.7

Red: At Risk

Orange: Falling Behind

Green: Achieving the ELOM Standard

TUC shows the greatest extent of change, with children performing well within the required ELOM standard range at endline (the acceptable age-related score at endline is 54.38)**Error! Bookmark not defined..**

Table 3 presents TUC children's progress on each of the ELOM domains. (LETCEE(SmartStart) attendance data was unreliable and thus could not be included in the analysis per domain.) The four programmes included all produced statistically significant improvements, however some gains were larger than others.

⁹ Dawes, A., Biersteker, L., Girdwood, L., Snelling, M. and Horler, J. (2019). Early Learning Programme Outcomes Study Technical Report. Claremont Cape Town: Innovation Edge (www.innovationedge.org.za) and Ilifa Labantwana (www.ilifalabantwana.co.za).

Table 3: TUC Children Early Learning Outcomes based on ELOM Domains.¹⁰

ELOM Developmental Domain	Baseline	Endline	Extent of TUC Change	Range of Change Across Programmes
Gross Motor Development	7.8	11.8	4.0	3.5 - 5.9
Fine Motor Coordination And Visual Motor Integration	8.3	14.3	6.0	1.9 - 6.0
Emergent Numeracy And Mathematics	6.8	10.3	3.5	2.4 - 3.7
Cognition And Executive Functioning	5.9	11	5.1	1.8 - 5.1
Emergent Literacy And Language	9.1	14.0	4.9	1.8 - 4.9

Red: At Risk

Orange: Falling Behind

Green: Achieving the ELOM Standard

Blue: Highest Score

The range of change across programmes (column 5) indicates that TUC children's ELOM scores were in the upper end of the score range, if not the highest score, on each developmental domain, apart from Gross Motor Development, although children still achieved the ELOM standard on this domain at endline.

TUC children made the greatest gains by far in Fine Motor Coordination and Visual Motor Integration, when compared with the other programmes, and moved from 'At risk' at baseline to 'Achieving the ELOM standard' at endline. The same was true for the Cognition and Executive Functioning domain, in which TUC children performed significantly better than children attending other programmes.

Fine Motor Coordination and Visual Motor Integration was a weak area across programmes, thus the marked improvement of TUC children on this domain is particularly noteworthy.

¹⁰ Adapted from: Dawes, A., Biersteker, L., Girdwood, L., Snelling, M. and Horler, J. (2019). Early Learning Programme Outcomes Study Technical Report. Claremont Cape Town: Innovation Edge (www.innovationedge.org.za) and Ilifa Labantwana (www.ilifalabantwana.co.za).

The study findings indicate that there is a need for focus on the 'Fine Motor Coordination and Visual Motor Integration', 'Cognition and Executive Functioning' and 'Emergent Numeracy and Mathematics' domains, whether this entail curriculum enhancement or practitioner training. This portrays the TUC centre programme in a positive light, as its children performed comparatively well on two out of three of these domains.

ECD Programme Factors that Predict ELOM Scores

Greater satisfaction of ECD practitioners with support produced significantly better performance, particularly on the Fine Motor Coordination and Visual Motor Integration domain. This finding had the largest effect size of the study and is an important consideration for TUC, whose centres had an average child to practitioner ratio of 30:1. This was the highest of all the programmes, which ranged from 11:1 to 22:1.

Child Factors that Predict ELOM Scores

Older children and children with higher height-for-age (less likely to be malnourished) performed significantly better on all ELOM domains.

TUC had the highest attendance rate, indicated by the average number of sessions attended. This was important because children with higher programme exposure performed better on all ELOM domains. Children who had attended their programmes for three years performed better than those who had attended for fewer years.

Home Environment Factors that Predict ELOM Scores

TUC households were found to have the highest number of books in the home. Children who had more learning resources (books and variety of toys) at home performed significantly better on the ELOM. Educational resources were a predictor of improved Cognition and Executive Functioning as well as Fine Motor Coordination.

Children enrolled at TUC ECD centres were from higher quintile groups than children enrolled in the playgroups. (Quintile groups provide a measure of socio-economic status. The lower the quintile the lower the socio-economic status).

The majority of children were cared for by their mothers, with the average number of children per caregiver being three (the least being one and the most being fifteen). 34% of caregivers had a Matric and on average the highest level of schooling attained was Grade 9.

Caregivers of children enrolled at TUC centres had the highest average education of all the programmes, which was Grade 11. The majority of the small number of caregivers who had a tertiary education had enrolled their children at ECD centres (TUC or Ntataise) rather than playgroups.

Caregiver (or other family member) interaction with children was generally low across the board, with significant numbers of caregivers never reading or singing to their children, or telling them stories. The negative affect that this is likely to have on language acquisition is noted in the study findings.

In addition, caregivers across all programmes reported that they had very little time to spend engaging in activities with their children, which is likely to negatively affect the implementation and outcomes of parenting sessions and programmes that rely on this approach to produce early learning outcomes (TUC does not include a parenting component in its pre-Grade R model).

Continuing Professional Development (CPD)

The centre-based programmes were assessed for alignment with Continuing Professional Development (CPD) indicators as stipulated by the US State Department of Education and the European Union. The findings revealed that the TUC model was aligned with all ten features of effective practitioner training and CPD highlighted in the literature review.

The study cites literature that indicates that ECD practitioner training and/or qualifications are associated with improved learning outcomes, but are insufficient on their own. The literature suggests that qualifications coupled with the provision of ongoing mentoring and other support from skilled experts is essential to quality improvement. This is a positive finding for TUC, as its model includes these elements.

Conclusion

In conclusion, whilst all programmes in the study achieved improved total ELOM scores, the TUC pre-Grade R centre programme demonstrated the greatest extent of change. TUC children had the greatest comparative improvement on three out of the five ELOM developmental domains. TUC children did not achieve as highly on the 'Gross Motor Development' and 'Emergent Numeracy and Mathematics' domains, although their endline ELOM scores were well within the range required for achievement of ELOM standards.

Practitioner satisfaction with support provided, amount of programme exposure, and access to educational resources within the home environment were noted as some of the most important predictors of changes in ELOM scores. TUC should remain cognisant of these variables when undertaking ongoing programme refinement and improvement.

