

2019



Basic Concepts  
Building Thinking - Harnessing Potential *unlimited*

# An Evaluation of the Basic Concepts Programme

## INCEPTION REPORT

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# INTRODUCTION

Alacrity Development Pty (Ltd) hereby present this Inception Report to the D.G Murray Trust to conduct an evaluation of the Basic Concepts Programme. The evaluation will assess the extent to which the programme improves the school preparedness of Grade R learners who attend schools that use the Basic Concepts curriculum. The evaluation will also investigate the relationship between Early Learning Outcomes Measure (ELOM) scores (collected at baseline) and Test of Basic Concepts Knowledge (TBCK) scores at end line (a predictive validity sub-component).

## EVALUATION METHOD

### Evaluation Questions

1. Does the Basic Concepts Programme improve the school preparedness of programme learners, and if so, by how much?
  - a. Are programme outcomes moderated by:
    - i. Child factors?
    - ii. Support and supervision of educators?
    - iii. Classroom size?
    - iv. Qualities of the District (Quintile, Language and Rural/Urban mix)?
2. Do Early Learning Outcomes Measure scores (ELOM) predict Test of Basic Concepts Knowledge (TBCK) scores?

### Evaluation Design

A quasi-experimental evaluation design using multi-stage cluster random sampling will be employed in 2020. A comparison group will be sampled from schools who are not receiving the intervention, but who are also candidates for the intervention in the future.

In 2020 we will visit an approved list of existing Basic Concepts schools to create the intervention group. As of writing this report, we do not have a final list of comparison

schools. We will identify suitable schools who do not receive the intervention to act as a quasi-experimental comparison group in January.

At this time, we have a complete list of BCP schools for each district. We have selected all Afrikaans schools in PKS (13), and all Setswana schools in JTG (15) and will conduct assessments in a random selection of 10 of these in each district. Each school has been assigned a random number. We will assess children in schools from this list during fieldwork until we have reached the correct number of children and schools. Some schools or teachers may be unavailable during fieldwork, or further logistical constraints may present too great a challenge for us to accommodate some schools at the top of our lists, and we will replace these as needed. The list for each district is presented below, along with their random number.

<b>Pixley Ka Seme</b>		<b>John Taolo Gaetsewe</b>	
School Name	Random Number	School Name	Random Number
Alpha Primary	12	Deben	12
Carnarvon Primary School	65	Gakgatsana p/s	65
Colesberg Combined School	10	Gamopedi	10
Grange Primary School	36	Glen Red	36
Hanover Primary School	70	Hotazel Combined	70
JJ Booysen P/S	54	Ipetlontle	54
John Rossouw Primary School	13	Legae la bana	13
Kareeville Primary	57	Mahikaneng	57
Lowryville P/S	64	Maruping	64
St Johns Primary	7	Masakhane Day Care	7
Van Rensberg	98	Moraladi	98
Van Wyksvlei	11	Olarato Early LC	11
Willie Theron Primary	38	Robanyane	38
		Segonyana	53
		Vlackfontein p/s	42

In addition, programme participants' outcomes at baseline will be compared to the norms of the ELOM reference group – a national sample of children, already collected by the ELOM Team.

## Sampling Plan

The following sampling will be employed by this evaluation:

1. Randomly select 10 intervention schools and 10 comparison schools from each of the John Taolo Gaetsewe District and the Pixley Ka Seme District, to realise a target total of 40 schools.
2. Randomly select 8 children in each intervention school and randomly select 4 children in each comparison school for a total of 240 children (160 intervention children; 80 comparison children).

The table below presents the suggested sampling frame:

<b>Intervention Group</b>	<b>Districts</b>	<b>Number of Schools per District</b>	<b>Number of Children per School</b>	<b>Total Children per Group</b>
<i>Treatment</i>	Pixley Ka Seme	10	8	80
	John Taolo Gaetsewe	10	8	80
<b>Sub-Total</b>				<b>160</b>
<i>Comparison</i>	Pixley Ka Seme	10	4	40
	John Taolo Gaetsewe	10	4	40
<b>Sub-Total</b>				<b>80</b>
<b>Total</b>				<b>240</b>

The calculation of the sample size followed the guidelines for power presented below:

Statistical Power Calculation, Using G\*Power:

- Analysis: Analysis of Variance with fixed effects and interactions.
- Effect Size = 0.25
- Power = 0.80
- Alpha = 0.05
- Sample N = 196
- Adjustment for Attrition = 1.20
- Adjusted Sample N = 235 (240 for sampling purposes)

## **Data Collection**

Baseline data collection will be conducted using the Early Learning Outcomes Measure (ELOM). Data will be collected in February 2020, over a maximum of 3 weeks, by 4 trained ELOM assessors. These assessments will be conducted with Grade R children who are younger than 70 months of age.

Two of these assessors will be seTswana speaking, and will conduct data collection in the John Taolo Gaetsewe District. Two of the assessors will be Afrikaans speaking, and will conduct data collection in the Pixley Ka Seme District.

We have submitted the required documentation to Innovation Edge in order to book our assessors, and these assessors will be allocated to us in January.

Endline data collection will be conducted at either the end of Grade R (November/December, 2020) or at the start of Grade 1 (February, 2021). Data will be collected using TBCK and will be facilitated by Basic Concepts Unlimited.

We will collect demographic information related to the child's height-for-age, home language, age and gender, as well as the name of the school and its quintile allocation.

We will request any records related to educator and school support from Basic Concepts Unlimited. We will also conduct interviews with programme staff and beneficiaries as is necessary.

The table below presents the evaluation questions, along with their instruments and data sources:

Evaluation Question	Data Source/s	Data Collector/s
<b>Does the Basic Concepts Programme improve the school preparedness of programme learners, and if so, by how much?</b>	<ul style="list-style-type: none"> <li>• ELOM assessment scores</li> <li>• TBCK assessment scores</li> </ul>	<ul style="list-style-type: none"> <li>• Trained ELOM assessors</li> <li>• Basic Concepts Unlimited</li> </ul>
<b>Are programme outcomes moderated by:</b> <ul style="list-style-type: none"> <li>- Child factors?</li> <li>- Class size (Educator Child Ratio)?</li> <li>- Support and supervision of educators?</li> <li>- Qualities of the District (Quintile, Language and Rural/Urban mix)?</li> </ul>	Demographic and programme data	Basic Concepts Unlimited
<b>Do Early Learning Outcomes Measure scores (ELOM) predict Test of Basic Concepts Knowledge (TBCK) scores?</b>	<ul style="list-style-type: none"> <li>• ELOM assessment scores</li> <li>• TBCK assessment scores</li> </ul>	<ul style="list-style-type: none"> <li>• Trained ELOM assessors</li> <li>• Basic Concepts Unlimited</li> </ul>

## Data Analysis Approach

In order to answer Question 1, we will compare child scores before they receive the Basic Concepts Programme, with those scores after they receive the Basic Concepts Programme. If there is a difference between the endline scores of children who **do** receive the programme and those who **do not** receive it, we will have evidence that the programme has an effect. If we can use a true experimental design as noted above, with a true counterfactual, then causality can be established with the greatest certainty.

In order to answer Question 2, we will compare child performance on the ELOM domain scores before the intervention, and child performance on the TBCK after the intervention. Only the comparison group will be analysed when answering this question.

We will also try to understand how both of these questions are influenced by the district, school, teacher, child and the interaction between Basic Concepts Unlimited and the school.

A more detailed description of the analysis is presented below:

TBCK scores will be entered as the dependent variable in all General Linear Models (ANOVA or Regression). ELOM scores will be entered as the independent variable. Other variables, like quintile, age, gender, level of deprivation (as measured by height-for-age) will be entered to account for their influence on the relationship between ELOM baseline score and TBCK endline score. Intervention school or comparison school will be entered as the primary grouping variable, and district will be entered as a secondary grouping variable.

This model, and different variations of it, will allow us to determine whether there is a difference between children whose schools participate in the programme, and those who do not.

We will also be able to determine whether the ELOM predicts performance on the TBCK by examining the baseline and endline performance of the comparison group.

## Evaluation Plan

This table breaks down the method, described above, into the evaluation process. The process is comprised of 4 chronological phases with specific activities aimed at answering the research questions.

	<b>Research Activity</b>	<b>Activity Objectives</b>	<b>Timeline</b>
<b>PHASE 1: Desktop Reviews and Contextualisation</b>	Review of programme documentation.	Familiarise with the Basic Concepts programme, and identify contextual factors that may influence the programme. Identify best practices among similar early learning programmes.	January 2020
	Review of academic literature.		
	Develop interview schedules for Basic Concept Beneficiaries.	Prepare for quantitative data collection.	
	Develop any necessary data collection tools, in collaboration with Basic Concept, to support measurement of child, home background, and practitioner factors.	Prepare for additional quantitative and qualitative data collection.	
	Contact and schedule interview times with participating stakeholders	Prepare for qualitative data collection.	
<b>PHASE 2: Baseline Assessments</b>	Finalise research sample	ELOM assessment data collection.	January/February/March 2020
	Contract ELOM assessors		
	Train assessors on programme context		
	Arrange fieldwork logistics		
	Obtain ELOM assessments		
	Analyse ELOM data		
	Write and submit baseline report	Update Basic Concepts management team on research progress and baseline status of sample.	

	<b>Research Activity</b>	<b>Activity Objectives</b>	<b>Timeline</b>
<b>PHASE 3: Endline Assessments</b>	Obtain TBCK data from Basic Concepts Unlimited	TBCK data collection and comparison to ELOM data.	December 2020/ January 2021
	Analyse TBCK data in relation to ELOM data		
<b>PHASE 4: Reporting</b>	Review of assessment findings.	Provide a useful and informative research report to Basic Concepts Unlimited.	February 2021
	Write and submit final report (refine as needed).		

# TEAM

## Principal Investigators

Jessica Horler and Matthew Snelling will be the principal investigators for this study. Co-directors of Alacrity Development, both graduated from the University of Cape Town in 2015 with Master's degrees in Programme Evaluation, and in 2015 with Honours degrees in Psychology.

Matthew's work has included formative evaluations, outcome evaluations, statistical reporting, M&E system development, database design, and the development of technologically advanced data collection tools. Matthew also worked as statistician in the development of the first valid and culturally sensitive measure of child development for South African children between the ages of 4 and 5 and a half years old – the Early Learning Outcomes Measure (ELOM). He provides ongoing statistical and evaluations support to the ELOM Learning Community.

Jessica's work has included the development of M&E systems and implementation frameworks, outcome evaluations, literature reviews, and the development of Theories of Change. Jessica is well-versed in rigorous research design and experienced in both quantitative and qualitative tool development and data analysis. She has experience in managing large-scale evaluations of early learning programmes in low income communities and capacity building in M&E.

Matthew and Jessica will be supported by the rest of the Alacrity Development team.

## Advisory

Andrew Dawes and Linda Biersteker will oversee the study as advisors. Andrew and Linda are the co-principal investigators in the development of the ELOM.

Andrew Dawes (MSc) is Associate Professor Emeritus in the Department of Psychology at the University of Cape Town and a Research Associate in the Department of International Development the University of Oxford, where he works on the Young Lives longitudinal study of children growing up in poverty in India, Ethiopia, Peru and Vietnam. He was co-founder of the University of Cape Town

Children's Institute, and was a Research Director at the Human Sciences Research Council for five years, responsible for research on early development, child protection and indicator development. In 2010 he was elected a Fellow of the Association of Psychological Science (APS). In addition to nine co-authored and edited volumes he has produced in excess of 160 journal articles, book chapters, and major research reports.

Linda Biersteker (MA) is an ECD consultant with nearly 40 years of research, training and programming experience in the early childhood development sector, has produced numerous publications and undertaken a number of assignments for government, academic institutions, NGOs and international agencies. Formerly Research Director at the Early Learning Resource Unit she has been working as an independent consultant since 2014. Linda is an experienced researcher and has undertaken extensive research on ECD policy, programming and training strategies in South Africa, the SADC region and internationally. She has also been involved in ECD training at universities and in the NGO sector on ECD curriculum and programming as well as research methods and assessment.

# BUDGET

BC EVALUATION BUDGET			
	Line Item	Budget	
Personnel	Advisory	R	35 000
	Principal Investigators	R	40 700
	Programme Management	R	50 400
	Data Management & M&E expertise	R	66 600
	Other Personnel	R	76 500
	<b>Total Expenditure Personnel</b>		
Direct Costs	Test kits (4 @ R500)	R	2 000
	Mobile phone/tablet and data per assessor (R2500)	R	10 800
	All Printing	R	1 500
	Communications	R	1 500
	Assessment support materials	R	3 000
	BC meetings	R	24 000
	Fieldwork travel costs (Assessor transport & acc)	R	72 000
	Contingency @10%	R	11 480
	<b>Total Direct Costs</b>		
		<b>Total Budget</b>	<b>R 395 480</b>