

THE INNOVATION EDGE EARLY LEARNING OUTCOMES MEASURE (*ELOM*)

<http://www.innovationedge.org.za/>

<http://ilifalabantwana.co.za/>

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the innovation edge

imagine change for children

THE INNOVATION EDGE (IE)

Commissioned the Research Team

The Innovation Edge:

- “offers a platform for testing the feasibility and effectiveness of Bold Ideas that can fundamentally change early life experiences for children - to give them the best possible start, right from the start.”
- Is part of a donor partnership called [Ilifa Labantwana](#);
- “Works with the South African Government and civil society partners in scaling up quality early childhood development across South Africa.”
- “Is supported by the [DG Murray Trust](#), the [FirstRand Foundation](#), [ELMA Foundation](#), [UBS Optimus Foundation](#) - and the [Omidyar Network](#).”

Background and Rationale

- **Internationally:** Efforts to design cost effective population-based tools for measuring early learning outcomes in LAMICs.
- **South Africa:** Lacks a tool for the measurement of ECCE programme effectiveness and which
 - Is linked to National ELDS;
 - Can be applied to children from a range of cultural and socio-economic settings;
 - Can be administered by trained experienced ECCE practitioners

THE PURPOSE OF THE ELOM

IE contracted the ELOM project team to develop a tool for assessing the developmental levels of children aged *54-66 months* (the period during which they become eligible for entry to Grade R).

1. To assess the performance of early learning programmes (of any type) in preparing children for Grade R, against a set of early learning & development standards (ELDS) that children **should** achieve prior to Grade R using reliable, valid measures.
2. Can be administered by a trained preschool educator
3. Assessment to take +/- 40 minutes
4. ELOM IS NOT
 - A school readiness test
 - A psychological test, although it draws on a number of items used in tests of child development .

WHAT ARE ELDS?

- Statements that describe expectations for learning & development of children across several domains of development
- What children should know & be able to do in these domains

STEPS IN ELOM DEVELOPMENT

1. **Content Validation**
 - **Selection of Domains & ELDS** based on literature & policy documents (NELDS, NCF & CAPS)
 - **Expert consultation with Educators** on priority measurable capabilities for Grade R which enable effective participation; predict early school success
2. **Source valid reliable instruments** for measuring ELDS appropriate for our context
3. **Expert consultation with local & international experts** on draft ELDS, Indicators and Measures
4. **Piloted ELOM with 42 children**
5. **Analyse Pilot data and finalise items**

Next Phase



Age validate on representative sample

ELOM DEVELOPMENTAL DOMAINS

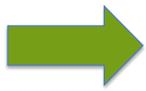
- 1. Physical Development
(Gross & Fine Co-ord) & Self Care**
- 2. Social & Emotional Development**
- 3. Approaches to Learning & Exec Functioning**
- 4. Language & Literacy Cognition**
- 5. Emergent Mathematics**

TOOLS THAT INFORM ELOM PILOT CONSTRUCTION

- Save the Children **IDELA**
- **ZAMCAT** (Zambian Child Assessment Test)
- UNESCO **LMTF Direct Assessment Tool**
- **SA NELDS** validation
- **EAP-ECD Scales**
- **Various Exec Functioning:** DCCS; Tapping; Head to Toes; Working Memory
- **Lego 6 Bricks RCT**
- **SA Child Assessment Scales (SACAS)**
- **Child Trends** “Measuring Elementary School students’ social & emotional skills”

OUR CRITERIA FOR SELECTING ITEMS WERE STRAIGHTFORWARD

1. Good fit with standards & indicators
2. Likelihood that they would be applicable across a range of SES & ethnolinguistic communities
3. Their use & validation in studies in similar contexts
4. Easy to administer by non-specialists
5. Cheap simple testing kit



31 ITEMS IN THE PILOT TOOL: (Reduce to those that work best after piloting)

BOTH TEACHER & DIRECT ASSESSMENT ARE USED

Direct Assessment

- Gross & fine motor
- Personal awareness
- Emergent literacy & print awareness
- Visual & auditory perception
- Cognition: Non-verbal reasoning; problem-solving
- Executive functioning
- Emergent mathematics: number concepts; & classification.

Teacher & Direct Assessment

- Emotional & social awareness
- Task orientation: persistence, attention, concentration

Teacher Assessment Only

- Self-care
- Social relations (adults & peers))

EXAMPLE 1: ELDS DOMAIN STANDARD INDICATOR & MEASURE

ELDS Domain: LANGUAGE AND LITERACY

Sub-Domain: EXPRESSIVE VOCABULARY

Standard: Children are able to communicate effectively & use language.

Indicator:

Child is able to name common objects .

Measurement:

1: Imagine you are going to the shop. **Can you tell me all the things you can think of that you can buy from the shop?**

2: Now, I want to you think about where you live. **Can you tell me all the things you can think of that you can see at your house (inside & outside)?**

EXAMPLE 2: ELDS DOMAIN STANDARD INDICATOR & MEASURE

ELDS Domain: : Cognition

Sub-Domain: Executive Functioning Rule Change

Standard: Children create solutions to challenges through problem solving

**Indicator: Child demonstrates cognitive flexibility.
Child demonstrates the ability to attend to instructions, remember them and control impulses while performing a task.**

Measurement:

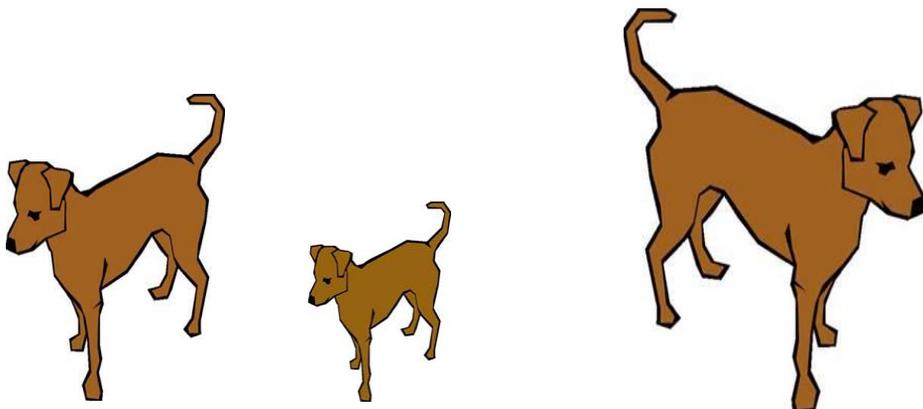
Dimensional Change Card Sort (DCCS): Colour Game; Shape Game Zelazo, D.P. (2006).

EXAMPLES OF PILOT ELOM ITEMS

1: DIRECT ASSESSMENT

MEASUREMENT VOCABULARY EXAMPLE

I'm going to show you some pictures and ask you some questions. *Show picture of three dogs:*
Put your finger on the largest dog.



SOCIAL DEVELOPMENT EXAMPLE: EMPATHIC CAPACITY

Now let's look at this picture.
Imagine this girl is a friend and she fell down and is hurt.

- 1: How do you think she is feeling right now?
- 2: What would you do to help her feel better?



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EF FLEXIBLE RULE USE DIMENSIONAL CHANGE CARD SORT COLOUR AND SHAPE GAMES (Zelazo)



PILOT ELOM ITEMS

2: ASSESSOR OBSERVATIONS

OVERALL OBSERVATION OF CHILD

1. Did the child pay attention to the instructions and demonstrations throughout the assessment?
2. Did child show confidence when completing activities; did not show hesitation.
3. Did the child stay concentrated and on task during the activities and was not easily distracted?
4. Was child careful and diligent on tasks? Was child interested in accuracy?
5. Did child show pleasure in accomplishing specific tasks?
6. Was child motivated to complete tasks? Did not give up quickly and did not want to stop the task?
7. Was the child interested and curious about the tasks throughout the assessment?
8. Could the child wait during and between tasks?
9. Could the child remain in his/her seat during the test?
10. Was the child alert and interactive?
11. Did the child cooperate?

PILOT ELOM ITEMS

3: TEACHER RATINGS

Teacher Rating Scales: Self Care and Social Relations

Sources: a) Child Trends (2014). Measuring Elementary School students' social and emotional skills; b) Desired results Dev. Profile California Dept. Ed.

1. Can this child use the toilet on her / his own?
2. Does this child work well with peers (can wait for their turn/manage impulsivity)?
3. Does the child resolve problems with peers without becoming aggressive?
4. Is the child thoughtful of the feelings of peers?
5. Does the child cooperate with peers without prompting?
6. Does the child understand the feelings of peers?
7. Does the child resolve problems with peers on her / his own?
8. Is the child able to negotiate sharing without aggression?
9. Does the child seek out assistance or support from familiar adults?
10. Does the child seek a familiar adult's ideas or explanations about events or experiences that are interesting to the child?
11. Does the child take initiative in creating cooperative activities with a familiar adult?

Teacher Rating Scales: SACAS Academic Readiness and Resilience Items

1. Is it hard to understand what child is saying?
2. Does child express needs and feelings appropriately?
3. Is child independent, does child like to do things without help?
4. Does child adjust well to changes in the classroom or home routine?
5. Does child approach new experiences confidently, without fear?
6. Can child accept things not going her / his way? (*reversed item for scoring*)
7. Does child face the pressures of competition well?
8. Does child know his or her strengths and weaknesses?
9. Is child a self starter?

Some Pilot Observations

Assessor Training: Time and practice!

Item Challenges:

Speaking about emotions: What makes you sad / happy? What do you do when you are.....?

Item Instructions & scoring: may vary across the sources (Beads; DCCS; DAP)

Standardisation: What is “an appropriate response.”

Cognition: Puzzle completion: *What sort of puzzle?*

Translation: Task instructions equivalent to English.

Test time: length

THE POST-PILOT AGE VALIDATION PROCESS

1. Early 2016: Test a representative Grade R sample in target age range.
2. Determine % of children **overall** who reach the standard for each domain (succeed on the items)
3. Determine % of children **in different SES** (School Quintiles), **deep rural & language communities** (Eng., Afrik, Zulu, Xhosa, Setswana) who reach the standards
4. Determine % of **boys and girls** who reach the standards
5. Post hoc: Determine effects of pre-Grade R programme experience (or lack thereof)
6. **Base final target standard for programme outcomes on that achieved by an agreed % of healthy children.**

Enkosi, Thank you, Dankie
From the ELOM team