

Supporting teachers to elevate educational outcomes in reading and numeracy

In 2020 the Centre for Social Development in Africa (CSDA), at the University of Johannesburg (UJ) initiated an innovative four-year study to assess child well-being and to improve their social and learning outcomes. Researchers tracked 242 children in their foundation years (Grade R – 3) from five schools in disadvantaged areas in Johannesburg and in one rural school in Moutse Village in Limpopo

The researchers sought to find breakthrough solutions that could improve child well-being by bolstering the social support systems around them, providing integrated health, education, mental health and welfare services to children and families at risk. The children were assessed and tailored interventions were delivered to those who were at risk of compromised wellbeing. Teachers, social workers, nurses, education psychologists collaborated in a Community of Practice (CoP) from different sectors and disciplines to implement the transformative programme.

What did we find in our urban and rural assessments of child wellbeing?

Educational outcomes

- Children performed poorly in urban schools in numeracy and literacy tests administered by the specialist team of researchers. The Moutse assessment has not yet been conducted and the tests will be administered in August.
- Caregivers perceived a gradual improvement in their child's educational progress in urban schools.
- Teachers in urban schools reported lower school attendance rates than parents/caregivers. According to the teachers, progress with schoolwork and completion of homework tasks decreased.
- In the rural school, teachers reported an attendance rate of 91%; 85% of children were reported to be progressing with school work and 79% were doing homework.
- Teachers reported low levels of parental/caregiver involvement in children's education in Moutse (28%). Just over half of the children did not have school uniform and supplies.

The CSDA hosted a symposium "Investing in the Early School Year" on 11 and 12 June 2024 to share lessons learnt from the [study](#). The symposium shared a synthesis of findings from the different sub-studies undertaken by the research team. Lessons learnt and challenges experienced in implementing the approach in schools and community real life settings were presented and discussed including strategies to strengthen learning and child wellbeing outcomes.

Prof Elizabeth Henning, South African Research Chair in Integrated Studies of Learning, Language, Mathematics and Science in the Primary School at University of Johannesburg presented insights from her work in the Community of Practice.

Her presentation titled "Elevating Educational Outcomes: Reading and mathematics in the foundation phase" delved into the science of reading and how teacher knowledge of the science of reading can help to improve learner outcomes. She also showed that the use of reliable assessment instruments for capturing foundation phase learners' number concept development can be useful for teachers to identify mathematics learning difficulties in children. The manual for the tests (the MARKO-DA SA) includes suggestions to assist children who are struggling.

Children in public schools in poor communities face many challenges that impede social- and learning outcomes. Poverty, food insecurity, social and emotional difficulties, family disruption and exposure to violence as well as challenges in the education system all impact on a child's wellbeing and their ability to learn basic numeracy and reading skills.

Prof Henning is an advocate for teachers and her team worked with teachers participating in the study to equip them with knowledge about the science of reading so that they can understand "why they do what they do".

She said: "By now you will know, while my heart beats, it will beat for teachers. So easily teachers are blamed. Teachers need to know more about the science of reading and the typical numeracy development of young children and they need to learn it at university or in teacher development programmes."

She highlighted that her research has shown that if a teacher accepts the basics of the science of reading they can adapt their practice and can infuse the principles they learn into how they teach the curriculum.

"To learn to read doesn't happen naturally. Teachers need to learn the basics of what happens in the human brain to be able to adapt their teaching. We're not born with reading ability; we have to learn to read. We rely on the sounds of a language that children hear since they are born, different sounds are picked up and kids in our country often hear at least two different languages, so they pick up these sounds. The sensitive teacher who knows about this will use those sounds cleverly."

She also touched on the challenges that teachers encounter beyond the curriculum, including that young children don't yet have all the cognitive skills required for optimal learning including the required attention, focus and the ability to shift executive functions. Many children are still building the capacity of their working memory and this makes learning to read and to develop number concepts more challenging. She also pointed to the fact that 'letter names' as a tool for initial reading can be confusing and that commonly used alphabet charts are poorly designed - children find them busy, distractive and difficult to engage with.

Prof Henning shared that teachers are required to teach children the skill of decoding. They teach children to connect the sound of their language with the written counterpart (letter), "Teachers believe that kids will remember it, but many kids don't. The connection takes place neurologically – this takes time and practice. The more you do it the stronger the synapses become – which means the knowledge is stored in memory."

She explained: "It is hard to teach a large class but if [teachers] know the science of reading, teachers shift their emphasis. They not only focus on children, but they look at themselves, they are more reflective. They assess each day - how much did my kids remember? And they repeat it, if they don't remember."

This research was put into practice, with the COP team providing training to teachers from participating schools. This training and support has had a positive impact on a teachers' ability to navigate the challenges they encounter in the classroom and in turn improves learner outcomes.

"Our research shows that if we want to protect the well-being of our children and enable them to thrive, early interventions are needed. South Africa is facing a deepening economic and social crisis.

As a new government is being formed, we offer the lessons learnt from the implementation of the CoP to government and its partners. Reimagining school-based support services is a vital step in improving social and learning outcomes for children,” says lead researcher, Professor Leila Patel.