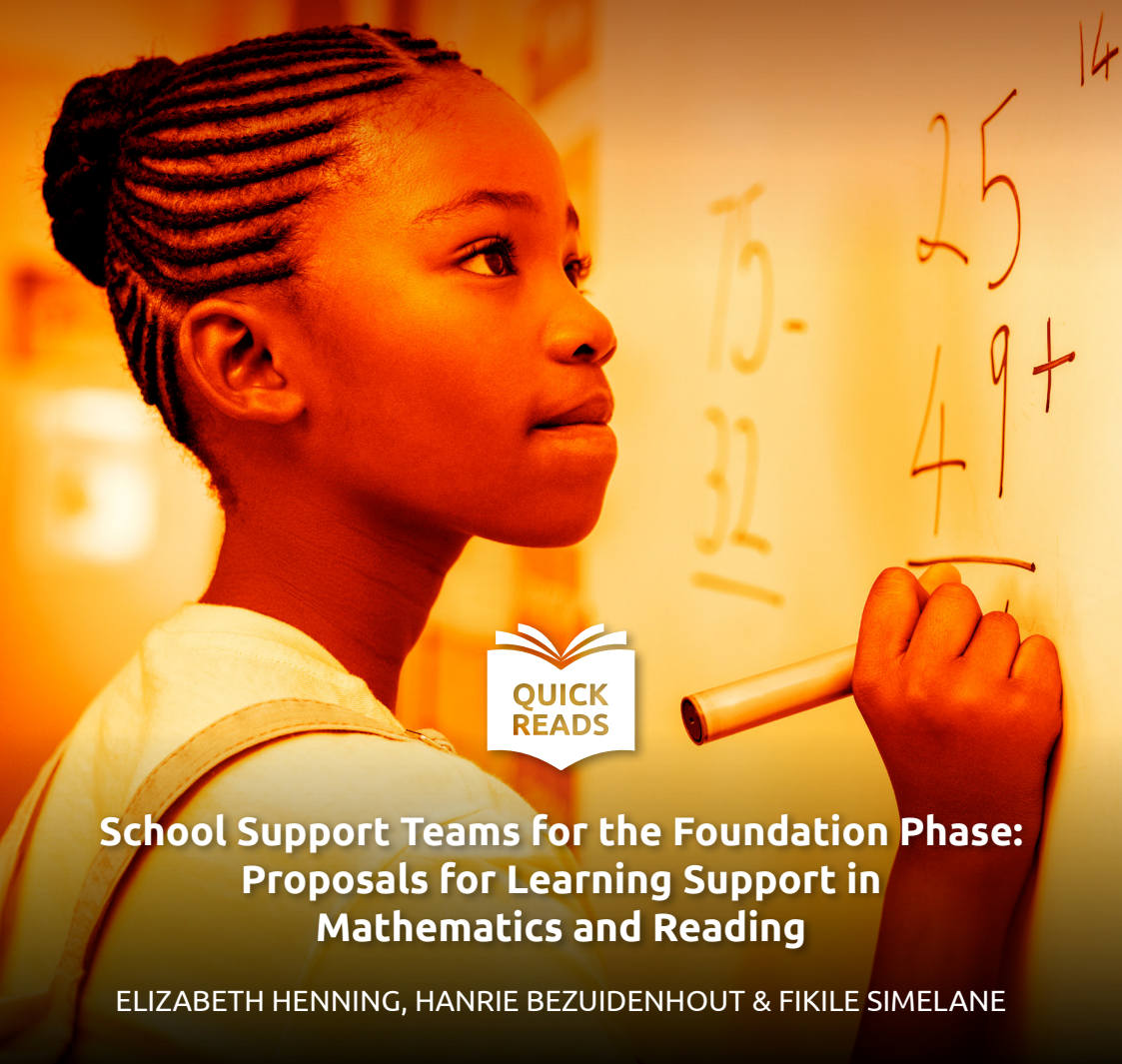


Communities of practice for social systems strengthening to improve child wellbeing



School Support Teams for the Foundation Phase: Proposals for Learning Support in Mathematics and Reading

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Introduction

The proposals for learning support that we outline here, stem from our **research findings and lessons learnt** from workshops conducted with teachers at the five participating schools in the Communities of Practice (CoP) study to improve literacy and numeracy outcomes for children. This work was completed by NRF/DSI South African Research Chair in Integrated Studies of Learning Language, Mathematics and Science in the Primary School, Prof Elbie Henning and her team in the Faculty of Education at the University of Johannesburg.

In 2021, a sample of learners from the participating schools were assessed for mathematics and language competencies with two standardised measures - the Early Grades Reading Assessment (EGRA)¹ and the MARKO-D SA² instrument that captures learners' number concept development. The findings were similar to outcomes of such measurements across South Africa.

Through our research, we identified specific areas that may be considered by members of school support teams when assisting learners who can be regarded as neurotypical. We also reference the views of the teachers who participated in our workshops.

Mathematics

The findings of the individual learner assessments that we conducted highlighted the importance of the medium of instruction in schools (the language of learning and teaching – LoLT). We propose that classroom communication can be adapted to allow for optimal code-switching (the practice of alternating between two or more languages in one conversation) and translanguaging (the practice of using all the languages a person speaks) such as reported in Tshikondela et al (2025). Even in schools where children begin their education in the first grade in a second language, teachers can follow a procedure of deliberate translation and translanguaging and involve the home language optimally.

Teachers may also use different communication approaches as a bridge for understanding. For example some children may be competent when they communicate orally, while others may need individual or small group discussions in which translanguaging can be used. To enrich learning we recommend that parents and caregivers engage in 'number talk' and by doing tasks in which mathematics-related vocabulary is used. Everyday activities in the home environment, such as cooking, baking and shopping are practical ways to build children's number concepts. This should be encouraged in everyday play activities although it may be challenging where parents/caregivers are working full days.

¹ Department for Education. [https://www.education.gov.za/ArchivedDocuments/ArchivedArticles/EGRA.aspx#:~:text=Early%20Grade%20Reading%20Assessment%20\(EGRA\)%20%2D%20an%20effective%20tool%20to,Follow%20Dup%20visits%20to%20schools.](https://www.education.gov.za/ArchivedDocuments/ArchivedArticles/EGRA.aspx#:~:text=Early%20Grade%20Reading%20Assessment%20(EGRA)%20%2D%20an%20effective%20tool%20to,Follow%20Dup%20visits%20to%20schools.)

² Henning, E., Balzer, L., Ehler, A., & Fritz, A. (2021). Development of an instrument to assess early number concept development in four South African languages. *South African Journal of Education*, 41(4).

Tshikondela, G., Nedambale, C., Bezuidenhout, H., & Henning, E. (2025). Grade 2 Learners' Performance on an Interview-based Numeracy Test: Assessments in English and Tshivenda. *African Journal of Research in Mathematics, Science and Technology Education*, 29(1), 1-15.

Teachers can use small activities events in the classroom, using everyday objects and learners themselves as numbers and space role-players in the activities. In our workshops with teachers, it was evident that they long for more time to explore playful learning approaches for mathematics. Their views are in line with research about early grades mathematics – they wish for the children to delve deeply into concepts and arithmetical procedures through playful activities in which they can take on a role and ‘become’ a character. The teachers also suggested that learners complete tasks in the workbooks only after such activities. Dramatisation of mathematics problems has proven to be a worthwhile pedagogical tool. Our research suggests that more time needs to be allocated to maths literacy in the early grades.

Reading

Apart from the low scores on the reading test, the teachers’ views expressed during workshops point to their limited understanding of how children learn to read. Based on their views and what we know of the Science of Reading (SoR), we would recommend that the phonemic awareness phase of teaching should be increased so that the relationship between graphemes (letters or letter strings that represent one sound) and their phonemic (acoustic) counterparts can be established firmly.

We also suggest that the ubiquitous focus on the names of the letters of the alphabet should be put on hold until children can read. The individual sound of a single letter, or of letter strings, should be strengthened when learning to decode words. Coupled with the introduction of graphemes, we would suggest that upper case versions of letters should not be introduced in the initial stages of learning to read, to reduce unnecessarily overloading the working memory.

Although the workbooks used in classrooms have been designed well, we would recommend that ‘playing with sounds’ and expanding vocabulary be emphasised to create a general classroom phonological ambience of oral language as the basis for written language.

Conclusion

It is critical that teachers understand some of the workings of the brain. As a result we recommend that teachers and support teams, engage in professional development learning opportunities which introduce them to the behavioral- and the neuroscience aspects of learning. For both numeracy and literacy teaching, the publications of Stanislas Dehaene on the topics of number sense³, reading⁴ and how we learn⁵ are useful resources.

There are many excellent videos that can be incorporated effectively into teacher development. We consider this video on [reading](#) and [mathematics](#) essential material

³ Dehaene, S. (2011). *The number sense: How the mind creates mathematics*. Oxford University Press

⁴ Dehaene, S. (2009). *Reading in the brain: The science and evolution of a human invention* (Vol. 7). Viking.

⁵ Dehaene, S. (2020). *How we learn: The new science of education and the brain*. Penguin UK.

for professional development of foundation phase teachers. It is included in a short learning programme at the University of Johannesburg and it will be included in a series of webinars about initial reading pedagogy.

Understanding the language of learning

- **Phonemic awareness:** *The ability to hear, identify, and manipulate individual sounds (phonemes) in spoken words.*
- **Graphemes:** *The smallest written units in a language that represent sounds, such as letters or letter combinations (e.g., "s," "sh," or "igh").*
- **Phonological:** *Relating to the sound system of a language, including how sounds are organised, produced, and understood.*
- **Neurotypical:** *Describes individuals whose neurological development and functioning align with societal norms. They process information and engage with the world in ways that is considered standard.*
- **Working memory:** *A cognitive system that temporarily holds and processes information needed to carry out tasks like learning, reasoning, or comprehension.*

Visit our website for more information <https://communitiesforchildwellbeing.org/>
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