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EXPLORATIONS OF EARLY LEARNING SYSTEMS IN SOUTH AFRICA

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PARVIN NEMATI[1], GABRIELLE GARON-CARRIER[2], ANNIE LEMIEUX[3], ELIZABETH HENNING[1], MOJTABA SOLTANLOU[1,4,5]

1 NRF SARChI Chair for Integrated Studies of Learning Language, Science and Mathematics in the Primary School, University of Johannesburg, Johannesburg, South Africa
2 Department of Psychoeducation, Université de Sherbrooke, Sherbrooke, Québec, Canada
3 Department of Preschool and Elementary School Education, Université de Sherbrooke, Sherbrooke, Québec, Canada **4** Department of Psychology and Human Development, UCL Institute of Education, University College London, London, United Kingdom
5 Centre for Educational Neuroscience, University of London, London, United Kingdom

Background

In South Africa, nearly half of all preschool children are not ready for school when they turn five, without the basic skills in reading, writing, and counting that are essential for learning. According to the most recent *Thrive by Five Index 2024*, South Africa's largest survey on preschool outcomes, only 42% of five-year-olds in preschool are developmentally "on track" in early learning (Giese et al., 2025).

Being ready for school involves a range of abilities, such as early numeracy and literacy skills, cognitive skills, emotional regulation, and physical development (Boivin & Bierman, 2014). In this study, we focus on early numeracy and literacy skills as key signs of readiness because they are central to what children are expected to learn when they start formal schooling.

To understand what helps children be ready to start school, we need to look at the whole picture: the child, their home, and their preschool setting. In South Africa, we already know that many children face delays in early learning (Hall, 2025; Tredoux et al., 2024), but less is known about how factors such as a child's abilities, caregiver and home environment, and a preschool program work together to shape school readiness.

Using a framework that examines development within real-life contexts (Bronfenbrenner, 2006), this study analyses the *Thrive by Five Index 2024* data for 5,001 preschool children across South Africa to examine how three areas are linked to school readiness, defined as early numeracy and literacy skills:

1. The child's own skills, including cognitive, motor, emotional, and attentional skills.
2. Caregiver and home factors, such as education, social support, and home learning activities.
3. Preschool program quality, including teaching methods, classroom environment, and program planning. By considering these factors together, we can better understand what truly helps children thrive by the time they start school.

Methods

Data came from the Thrive by Five Index 2024, a national survey. For details on the sample and measures, please refer to **https://thrivebyfive.co.za/methodology/**

Sample
In the current study, 5,001 children aged 50–59 months (51% girls, 49% boys) were included in the analyses. Children were enrolled in 1,388 preschool settings across all 9 provinces of South Africa.

Measure
School readiness was measured using the Early Learning Outcomes Measure (ELOM 4&5; Dawes et al., 2025; Snelling et al., 2019). Two key areas were analyzed as school readiness: (1) Emergent Numeracy & Mathematics, (2) Emergent Literacy & Language. In the current study, children were separately categorized for early numeracy and literacy skills as: (1) Being on Track: Scoring at or above the 60th percentile, (2) Not being on Track: Scoring below the 60th percentile.

Child's Own Skills
All data on the child's own skills, like cognitive, motor, emotional, and attentional skills, were collected by ELOM 4&5. The ELOM 4&5 was standardised in South Africa for children aged 50–69 months. It offers a valid measure of child development and is available in all 11 official South African languages.

Caregiver and Home Factors
Data on the caregiver and home factors, including age, education, prenatal smoking and drinking, social support, daily functioning, and paternal stimulation, were obtained by a 20 min telephonic interview with 3,841 primary caregivers, equivalent to 77% of the assessed children. The primary caregiver was defined as the adult most responsible for the child's daily care and well-being, and thus best positioned to report on their development and home environment.

Preschool Program Quality
Preschool program quality, including preschool program's fees that were reported by principals and teaching strategies, teacher-child relationships and assessment, planning and assessment were assessed by Learning Programme Quality Assessment Version 2 Tool (LPQA v2; Biersteker et al., 2025), which is a two-hour classroom observation tool that measures the quality of a group learning programme for children aged 3–5 years.

Key Findings

The Child's Own Skills Matter Most:

Our main finding was that children's own skills are the most important predictors of whether they will be ready for school, and these skills include:

- Cognitive skills (e.g., problem-solving and memory) were the strongest predictor of whether a child was on track for both early numeracy and literacy skills.
- Motor skills, including gross motor skills (e.g., running and jumping) and fine motor coordination and visual motor integration (e.g., holding a pencil and copying written patterns), were also positively linked to school readiness.
- Attention during tasks (e.g., staying focused and interested) was especially important for early literacy skills.
- Emotional readiness (e.g., being able to express needs and manage feelings) was positively associated with whether a child was on track for school readiness.

Caregiver Factors Were Less Important Than Expected

Surprisingly, in our analysis, caregiver and home factors did not show significant associations with whether a child was on track for early numeracy or literacy skills. This does not mean caregivers are unimportant. One speculation is that the influence of the home environment may be more closely intertwined with the child's own emerging skills, such as motor abilities and emotional confidence, which we found to be strong predictors of school readiness.

Preschool Program Quality Was Not Broadly Determinative

The quality of the preschool program also played a small role in predicting being on track or not in early literacy and numeracy skills, but only in some areas:

- Good planning and assessment by teachers were linked to better literacy outcomes.
- Positive classroom relationships and interactions were unexpectedly linked to lower numeracy readiness. This finding was in line with broad measures of preschool quality that show little impact on learning (Suchodoletz, 2023).
- Teaching strategies and school fees were not directly linked to school readiness in our study.

Conclusion

This study provides a foundational exploration of the Thrive by Five Index 2024 national dataset. Getting children ready for school is not about one single thing, but about building a strong foundation across many areas of development. In South Africa, a child's cognitive, motor, emotional, and attention skills are the strongest drivers of early numeracy and literacy skills. While caregivers and preschool programs play less important roles, their impact may be most powerful when they focus on strengthening these core abilities in children.

Future research should further investigate why their influence appears attenuated in this model, whether due to the quality of caregiver involvement, variability in preschool program implementation, or limitations in the measurement tools used. Early interventions should therefore adopt an integrated approach that targets children's own abilities and at the same time works with their families and teachers, to understand and improve their specific roles and preschool programs' quality that effectively foster school readiness.

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