

Learning begins at birth: Improving access to early learning

Hasina Ebrahim (School of Social Sciences and Language Education, University of the Free State), Juliana Seleti (UNICEF South Africa) and Andrew Dawes (Department of Psychology, University of Cape Town and Ilifa Labantwana)

Early learning is a complex process involving interactions between the child's brain and experiences. The required early stimulation must be appropriate to the child's developmental level, and is a central consideration in the design of early learning programmes.

Formerly, early learning was closely associated with cognitive development. Today, it is recognised that self-regulation, perseverance, motivation and socio-emotional development all underpin children's ability to learn.

Ideally early learning should start at home, progressing to playgroups and more formal programmes for older children. Yet only 20% of South Africa's poorest children under 5 years access a formal early learning programme.¹ While the National Development Plan² promotes universal access to early education for 4 – 5-year-olds and acknowledges the need to improve nutrition and education for 0 – 3-year-olds, there is no agreement yet on how these services will be provided.

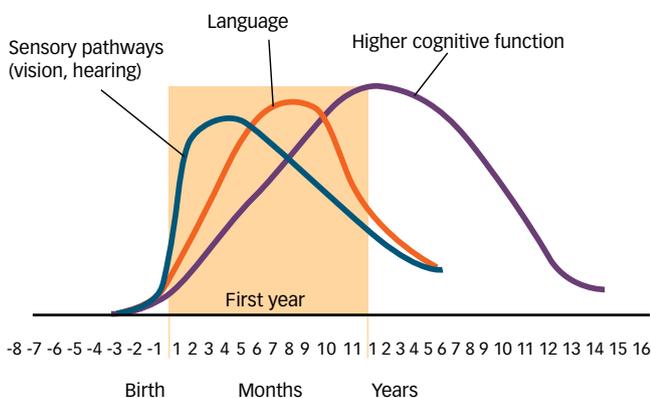
Recognising stimulation for early learning as a critical component of an essential package of services for young children, this essay poses three questions for discussion:

- What are young children's learning needs?
- What kind of early learning programmes are effective?
- What can be done to improve access and quality?

What are young children's learning needs?

Children's capacity to learn is dependent on the health and functioning of their brain. The basic architecture of the brain is

Figure 8: Human brain development – making critical connections in the first year of life



Source: Nelson CA In: Shonkoff J & Phillips D (2000) *From Neurons to Neighbourhoods. The Science of Early Childhood Development*. Washington, DC: National Academy Press.

well established by birth, with areas responsible for early learning developing rapidly during pregnancy and the first 24 months of life, as illustrated in figure 8.

Children are therefore born ready to learn from their interactions with the environment. In response to the stimulation they receive, neural networks associated with language, memory and higher cognitive functions evolve rapidly.³

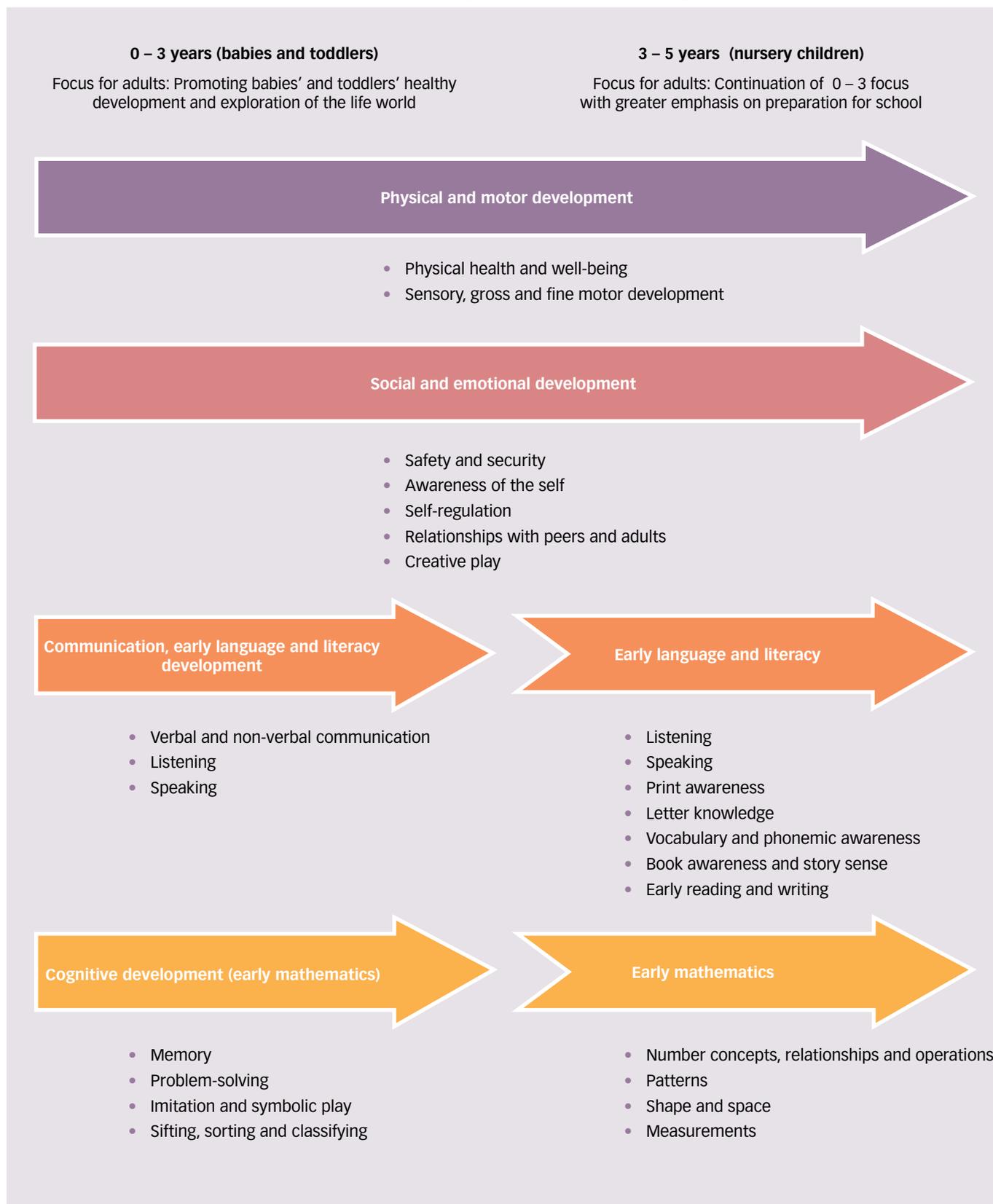
Children from birth to age five are learning at a rapid rate. Attention needs to be paid to their holistic development (physical–motor, social–emotional, communication–language and cognitive abilities) in integrated ways.⁴ Each area of development has indicators which can guide adults to help children learn. Table 8 provides an example of how to organise the developmental and learning needs of children from birth to five.



Adults can help children reach out and explore the world around them.

© Heather Mason, Ilifa Labantwana

Table 8: Example of how developmental and learning needs of young children (0 – 5 years) can be organised



Source: Adapted from: Ahola D & Kovacic A (2007) *Observing and Understanding Child Development – A Child Study Manual*. New York: Thomson/Delmar; Department of Education & UNICEF (2009) *The National Early Learning and Development Standards for Children from Birth to Four*. Pretoria: UNICEF; Scott-Little C, Kagan SL & Frelow VS (2006) Conceptualisation of readiness and the content of early learning standards: The intersections of policy and research? *Early Childhood Research Quarterly*, 21: 153-157.

For children from birth to three years, a health-promoting environment that is safe, stable and characterised by nurturing relationships can stimulate learning. Learning should take place at home and in group programmes such as playgroups and preschools. Parents, caregivers and teachers at ECD centres contribute to what children learn and how they learn.⁵ The content for early learning in families is influenced by culture, religion, child-rearing practices, caregivers' images of children (eg as obedient and respectful) and their views on early education. At formal ECD centres it is influenced by the philosophies and goals of curricula, learning programmes and government priorities.

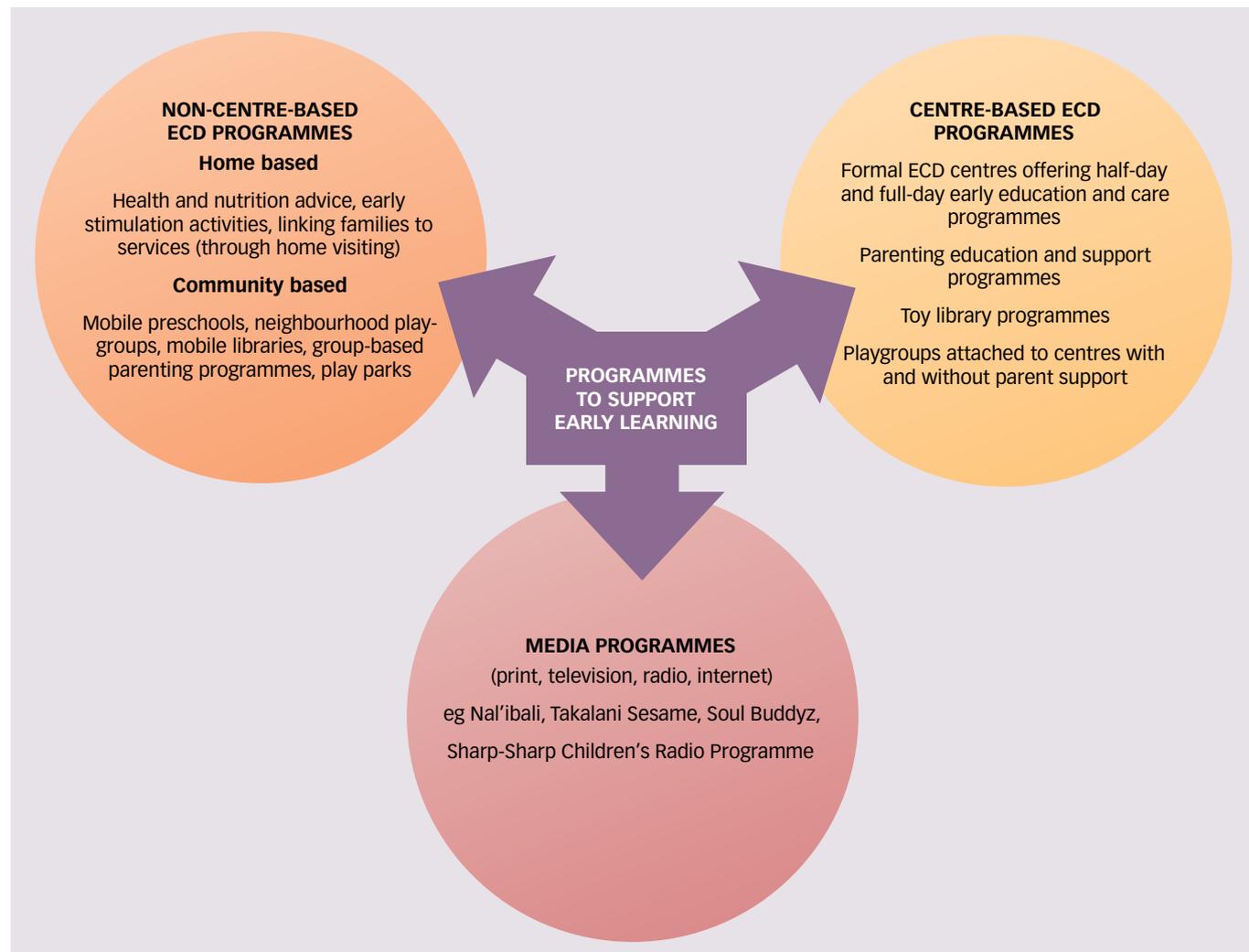
There are key considerations in supporting children's learning at different stages of development. From birth to three, learning needs can be understood as an active process. Active learning in babies and toddlers has been described as "the process by which they explore the world either through: observing (gazing at their hand), listening, touching (stroking an arm/bottle), reaching, grasping, mouthing, letting go, moving their bodies, smelling, tasting or making things happen with objects (putting things in and out of a box ...)".⁶ When this type of learning takes place babies and toddlers get to know more about people, objects and materials around them.⁷

To be confident explorers, children from birth to three need to experience secure attachments, trusting relationships and interactions that are developmentally appropriate.⁸ Early stimulation involves touching, talking to the child, making sounds, massaging children and responding to their reactions and need for attention. For sensory motor development, children from birth to three years need to be exposed to materials and objects that allow them to manipulate and explore. They also need opportunities to make choices, solve problems, experiment with language and develop their social skills.⁹

From 3 – 5 years, children need stimulation that prepares them for school. In order to shape quality early experiences for this age group, learning environments need to continue to pay attention to health and nutrition in addition to behavioural, academic and social skills for school readiness.¹⁰ Attention to the developmental domains continues together with greater focus on content areas such as emergent literacy and emergent mathematics (see table 8 on the previous page). Children are best supported through a play-based approach which creates a balance between adult-directed and child-initiated activities.

Poor and vulnerable children run the risk of not having their learning needs met. The achievement gap between more and less

Figure 9: Programmes to support early learning



advantaged children is created by “the difference in the quality of environments which young children experience during the time of rapid development”.¹¹ In South Africa, poverty makes families more vulnerable due to their low levels of education and economic and environmental deprivations.¹² The distress of living in poverty can result in harsh and less responsive parenting, including corporal punishment.¹³ Early learning is negatively affected by the lack of enrichment, stress and trauma experienced in the home together with the lack of quality government services to offer compensation for developmental deficits.

The lack of early learning impacts on how children learn at school: In the United States, it was noted that when poor children start school they are six months behind their more advantaged peers.¹⁴ Based on children’s poor performance in literacy and numeracy in the foundation phase in South Africa,¹⁵ it is reasonable to assume that the achievement gap is greater. Children from poor families are more likely to repeat grades, develop special education needs in their later school years, and leave school early.¹⁶ Therefore, early interventions are needed to reduce the school readiness gap for children from families with low socio-economic status.

What kinds of programmes are effective, and how can quality be strengthened?

The National Integrated Plan for ECD 2005 – 2010¹⁷ provides for a range of programmes, including home- and community-based programme interventions, which show promise in reaching very young children and those who cannot afford to pay ECD centre fees. Figure 9 shows different types of programmes that can support early learning.

Non-centre-based programmes

Non-centre-based ECD programmes that focus on early stimulation through home visiting can positively influence cognitive skills and school outcomes.¹⁸ Effective home-based interventions require quality design, delivery and duration. The joint involvement of the caregiver and child (sometimes known as “two generation” programming) is generally more effective than parent education alone, as home visitors improve child development by working directly with the child and by enhancing the caregiver’s knowledge and ability to support all aspects of early development.¹⁹

Positive child outcomes can be achieved when joint activity with parents and children stimulates active participation over an extended period of time. The relationship between the visitor, child and caregiver is a critical factor. It is also essential to integrate early stimulation with other interventions such as nutrition, health and social protection to mediate multiple disadvantages.

Several home-visiting interventions in low-income settings have been evaluated. An example is a Jamaican intervention that provided stimulation and nutrition at weekly home visits delivered by paraprofessionals from birth to 24 months.²⁰ When compared with a control group, these children had better schooling and employment outcomes.²¹ A Turkish programme for mothers with older preschool children also showed improved school outcomes and long-term impacts into adulthood.²²

There are no robust experimental studies of this kind in South Africa. An evaluation of the Sobambisana programme compared the impact of home visiting on children in grade R with children from similarly deprived communities who had attended preschool. While home visiting improved parenting practices, children who attended good quality preschools performed significantly better on cognitive and language and other academic readiness measures, possibly due to programme content, length and frequency of inputs.²³

A user-perception study of four family support programmes in South Africa which included home-based interventions with children²⁴ noted that the main gain for families was access to early learning experiences at no cost. Caregivers stated that this exposure helped children prepare for school. However, the actual impact on the children is not known.

Playgroup models are frequently advocated. They have considerable potential to be a cost-effective alternative to centre-based provision provided the programme is well designed, delivered by trained and supervised ECD practitioners, and children’s attendance is sufficient²⁵ (see, for example, case 9).

Two local projects show promise for inclusion of caregivers and children in interventions to support early learning (see case 9 below, and case 10 on p. 70). However, they need to be costed.

Centre-based programmes

In South Africa, children below grade R currently have limited access to centre-based early learning because of costs and the distance from home.²⁶

Internationally, studies point to positive outcomes for children in low-income countries who attend good centre-based programmes.²⁷ These include better cognitive outcomes, and school attendance, retention and performance. Adult employment outcomes are also enhanced.

Attention to quality is also essential to ensure centre-based programmes are effective in making up for the disadvantages experienced by poor children. High quality centre-based

Case 9: The Ntataise Mosupatsela Playgroup Programme

This programme targets children of ages 3 – 5 years who cannot access early education at ECD centres because their parents are unable to afford fees. The children and parents participate in a weekly two-hour playgroup session at community sites with a trained ECD teacher, where the children are exposed to school readiness activities. Parent attendance is encouraged to help them to support their children at the sessions, and at home.

An evaluation of this programme noted that, although the levels of parental participation was low, children who attended 15 or more sessions were more likely to be within the norm for cognitive development than those who attended less.²⁸

Case 10: The Family Literacy Project

This project operates in deep-rural sites in KwaZulu-Natal to develop literacy at different generational levels. It aims to improve literacy and language skills of adults and children; build the early learning and literacy capacities of young children in the home; promote health and well-being of young children; and increase access to contextually appropriate reading materials and toys.²⁹

In the first seven years, adult learners develop their own literacy skills to help themselves and their children. In the next seven years, they take on the role of facilitators of literacy for non-project households and create networks for self- and community development. The home-based interventions make use of book reading and literacy activities through a play-based approach in the children's mother tongue. Information sessions with primary caregivers also promote key family and health practices.

The evaluation of this project³⁰ showed a range of benefits: changes in adults' literacy abilities leading to greater access to information; better approaches to dealing with money; and more confidence to teach children. The findings also noted changes in attitudes and behaviour towards children, reading and playing with children, and improved health practices.

interventions which are suitable for older children tend to be more effective in improving language and cognitive outcomes than home-based early stimulation interventions.³¹

In addition to quality infrastructure, the following are recognised key programme quality parameters for centre-based provision in both low- and high-income countries:

- Learning materials provide opportunities for stimulation across developmental domains and encourage problem-solving.
- Well-trained practitioners receive ongoing post-qualification support.
- Teaching strategies consider cultural and linguistic diversity as well as children with disabilities.
- Teaching strategies include frequent, warm and responsive interactions that scaffold the development of skills for schooling.
- Children experience both individual and group activities, with more of the former than the latter.
- Practitioners engage children's caregivers on their progress.³²

A study of ECD centre quality in the Western Cape³³ showed that the quality of interaction between teachers and children was generally good, and the quality of children's care and learning environments in classrooms fell within the minimum standards. However, activities were of poor quality, as was language facilitation, indicating limited opportunities for scaffolding early learning. The main factors found to affect ECD centre quality were the quality of centre management and whether fees were charged.

Children with disabilities

Training for early intervention for children with disabilities in South Africa needs greater attention. Early identification of children with special needs is difficult unless the disability is clearly visible. It escapes adults' attention due to several factors: perceptions that children in early childhood are still young and developing; poor practitioner training; lack of resources to seek help; and cultural values and religious beliefs around the inclusion of children with disabilities.

Government support in terms of early identification, intervention and rehabilitation services is also weak. Interventions for young children with disabilities can offer support. For example, deaf and hard of hearing children (0–3 years) and their parents are supported in a South African home-based early intervention programme.³⁴ Parents gain information and skills, and children are exposed to developmental opportunities to prepare them for school.

What can be done to improve access and quality?

Establishing more centres only partially addresses existing problems³⁵ because such centres are often inaccessible to rural children, unaffordable to many poor children, and frequently not sustainable. In addition, government does not currently have the capacity to regulate existing centres and ensure quality. Therefore, a mix of provision is required.

Age-appropriate interventions

From birth to three years:

- Home visiting has the potential to reach significant numbers of the many poor children in this age group who are not in centre-based care. The potential of this approach has been proven but quality must be assured through appropriate design, training and supervision.
- Infants and toddlers should preferably be cared for at home, but for many working parents this is not an option. For these children it is essential that the quality of care and stimulation at the centre they attend is enhanced and monitored. In many instances, day care and ECD centres are of poor quality and likely to have a negative impact on development.³⁶

For three- to five-year-olds:

- Where feasible, centre-based programmes that are subsidised and closely monitored for qualityⁱ are an essential part of the mix. Access could be increased if systemic and funding challenges are addressed (see the essay on pp. 34–43).
- For those not in centres, other programmes – such as quality community playgroups, access to community toy and book libraries, story-telling and early reading programmes – are options that would support early learning and have potential to be taken to scale.

In considering scaling up these programmes, it is essential to couple quality to access, and to pay attention to evidence of effectiveness in improving early learning outcomes. Thus, it is not

ⁱ As provided for by the Norms and Standards of the Children's Act.

just about increasing the numbers of children having access to early learning programmes, but also about increasing the quality of those programmes. Equally important is the concerted inclusion and support of children with disabilities and special needs in early learning programmes.

Cost

Costing home- and centre-based early learning programmes is complex, but essential in order to deliver quality programmes at scale. Current subsidies for poor learners attending registered ECD centres do not cover the full start-up or operating costs, and this hampers access and the quality of centre-based programmes in poorer communities, while there is no costing model for home-based services. These and other implementation challenges are discussed in the essay on pp. 34 – 43.

Curriculum and quality assurance mechanisms

Commitment to sound early education starts with the recognition that the needs of young children are different from those in formal schooling. To improve early education programmes it is essential to finalise the National Curriculum Framework for birth to four, (made available for public comment in late August 2013), and to establish an effective monitoring and support system.

Staff and qualifications

High quality early education depends on the qualification and motivation of staff to design and deliver effective learning experiences. Currently there are qualifications for early childhood practitioners at National Qualifications Framework levels 4 and 5. The Expanded Public Works Programme, further education and training/private colleges, non-governmental organisations and some higher education institutions are contributing teachers with some qualification. This, however, will not be enough to meet the demand for qualified teachers in an expanded focus on early education. Career pathing and progression are crucial for the professionalisation of the workforce. In addition, attention should be paid to salaries in order to attract and retain early childhood teachers and ensure stability in the sector.

Conclusion

Meeting the National Development Plan priorities by shaping sound early stimulation and learning experiences for children prior to formal schooling is challenging, but there are a number of promising programmes. Some of these programmes still need evaluation and a cost-benefit analysis in order to make informed decisions about scaling up.

A variety of delivery models such as ECD centres, home visiting, community playgroups, libraries and media programmes can be strengthened to improve access and promote quality. Similarly, basic qualifications for ECD practitioners can be expanded to ensure progression and career pathing. It is important to build on existing programming strengths if early learning interventions are to serve as a solid foundation for early schooling and an effective vehicle for transforming South African society.

References

- Biersteker L (2012) Early childhood development services: Increasing access to benefit the most vulnerable children. In: Hall K, Woolard I, Lake L & Smith C (eds) (2012) *South African Child Gauge 2012*. Cape Town: Children's Institute, UCT.
- National Planning Commission (2012) *National Development Plan: Vision 2030*. Pretoria: The Presidency.
- Fox SE, Levitt P & Nelson CA (2010) How the timing and quality of early experiences influences the development of brain architecture. *Child Development*, 81(1): 28-40.
- Department of Education & UNICEF (2009) *The National Early Learning and Development Standards for Children from Birth to Four*. Pretoria: UNICEF.
- Miller P & Votruba-Drzal E (2012) Early academic skills and childhood experiences across the urban-rural continuum. *Early Childhood Research Quarterly*, 28: 234-248.
- French G & Murphy P (2005) *Once in a Lifetime: Early Childhood Care and Education from Birth to Three*. Dublin: Banardos National Children's Resource Centre. P. 39.
- Gopnik AN, Meltzoff A & Kuhl P (1999) *The Scientist in the Crib: Minds, Brains and How Children Learn*. New York: William Morrow.
- Nutbrown C & Page J (2009) *Working with Babies and Children from Birth to Three*. London: Sage.
- Engle PL, Black MM, Behrman JR, de Mello MC, Gertler PJ, Kapiriri L, Martorell R, Young MY & the International Child Development Steering Group (2007) Strategies to avoid loss of developmental potential in more than 200 million children in the developing world. *The Lancet*, 369: 229-242.
- Lockhart S (2011) Active learning for infants and toddlers. *ReSource*, Spring 2011: 5-10.
- Scott-Little C, Kagan SL & Frelow VS (2006) Conceptualisation of readiness and the content of early learning standards: The intersections of policy and research? *Early Childhood Research Quarterly*, 21: 153-157.
- Magnuson K & Shager H (2010) Early education: Progress and promise for children from low income families. *Children and Youth Services Review*, 32:1187.
- Republic of South Africa (2010) *Millennium Development Goals Country Report*. Published by the United Nations Development Programme.
- Muthukrishna N (2006) *Mapping Barriers to Education in the Context of HIV/Aids*. Pietermaritzburg: University of KwaZulu-Natal.
- See no. 11 above.
- Department of Basic Education (2012) *Report on the Annual National Assessments 2012*. Pretoria: DBE.
- Reynolds AJ (1998) Developing early childhood programmes for children and families at risk: Research-based principles to promote long-term effectiveness. *Children and Youth Services Review*, 20(6): 503-523.
- Departments of Education, Social Development, Health & UNICEF (2005) *National Integrated Plan for Early Childhood Development in South Africa 2005 – 2010*. Pretoria. DBS, DSD, DoH & UNICEF.
- Baker-Henningham H & Boo FL (2010) *Early Childhood Stimulation Intervention in Developing Countries: A Comprehensive Literature Review*. Bonn: Institute for the Study of Labour; See no. 8 above (Engel et al, 2007).
- Biersteker L, Dawes A & Altman M (2008) *Scaling up Early ECD (0 – 4) in South Africa*. Pretoria: Human Science Research Council.
- Walker SP, Chang SM, Vera-Hernández M & Grantham-McGregor S (2011) Early childhood stimulation benefits adult competence and reduces violent behavior. *Pediatrics*, 127: 849-857.
- Gertler P, Heckman J, Pinto R, Zanolini A, Vermeerch C, Walker S, Chang SM & Grantham-McGregor S (2013) *Labor Market Returns to Early Childhood Stimulation: A 20-Year Follow Up to an Experimental Intervention in Jamaica*. Washington DC: The World Bank.
- Kagitcibasi C, Sunar D, Baydar N & Cemalcilar Z (2009) Continuing effects of early enrichment in adult life: The Turkish early enrichment project 22 years later. *Journal of Applied Developmental Psychology*, 30(6): 764-799.
- Dawes A, Biersteker L & Hendricks L (2012) *Towards Integrated Early Childhood Development. An Evaluation of the Sobambisana Initiative*. Cape Town: Ilifa Labantwana.
- Ebrahim HB (2013) An analysis of four family support programmes in South Africa. Bernard Van Leer. [Unpublished report]
- See no. 23 above.
- Ebrahim HB & Penn H (2012) Understanding research on early childhood in KwaZulu-Natal, South Africa. In: Halai A & Williams D (eds) *Researching Methodologies in the South*. Oxford University Press: Pakistan.
- See no. 8 above (Engel et al, 2007);
- Nores M & Barnett SW (2010) Benefits of early childhood education interventions across the world. *Economics of Education Review*, 29: 271-282.
- See no. 23 above.
- Kerry C (2009) *Family Literacy Project: Masifunde Njengomndeneni*. Underberg, KwaZulu-Natal: Family Literacy Project.
- Land S & Lyster E (2011) *Family Literacy Project Evaluation Report*. Underberg, KwaZulu-Natal: Family Literacy Project.
- See no. 19 above.
- Biersteker L & Kvalsvig J (2007) Early childhood development and the home-care environment in the pre-school years. In: Dawes A, Bray R & van der Merwe A (eds) *Monitoring Child Well-being: A South African Rights-based Approach*. Cape Town: HSRC Press.
- Myers RG (2004) In Search of Quality in Programmes of Early Childhood Care and Education (ECE). Paper commissioned for the EFA Global Monitoring Report 2005, The Quality Imperative. UNESCO [On-line];
- Sylva K, Melhuish E, Sammons P, Siraj-Blatchford I & Taggart B (2004) *The Effective Provision of Pre-school Education (EPPE) Project: Findings from the Pre-school Period*. London: University of London, Institute of Education.
- See no. 23 above.
- Storbeck C & Moodley S (2011) ECD policies in South Africa – What about children with disabilities? *Journal of African Studies and Development*, 3(1): 1-8.
- Richter L, Biersteker L, Burns J, Desmond C, Feza N, Harrison D, Martin P, Saloojee H & Slemming W (2012) *Diagnostic Review of Early Childhood Development*. Pretoria: Department of Performance, Monitoring and Evaluation & Inter-Departmental Steering Committee on ECD.
- Western Cape Department of Social Development (2010) *Western Cape Department of Social Development 2009 Audit of Early Childhood Development Facility Quality*. Cape Town: WC DSD.