

School Readiness Begins in Infancy

Social interactions during the first two years of life provide the foundation for learning.



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By J. Ronald Lally

School readiness interventions that start later than infancy may be too late to be effective. If educators and policy makers fail to include experiences for infants and toddlers in their initiatives and continue to launch school-readiness programs starting at age three or later, our children — and society — may suffer.

When children arrive at 1st grade, they need social, emotional, intellectual, and language skills to participate successfully. To prepare children for school, numerous initiatives have sprouted all over the country to make kindergarten and preschool programs available to all children. Most of these programs are designed for children ages three and beyond. Yet, it's during the first two years of life that early experience starts shaping the foundational learning structures of the brain.

Brain structure is shaped, either positively or negatively, by a baby's day-to-day interactions with those who principally provide the child's care. A baby's social environment — particularly the one created jointly by mother and baby, but also relationships between other principal caregivers and the baby — has an enduring effect on future development and learning (Schore 2005).

By age two, structures in the brain that influence how children will learn have already been created. The quality of the care babies receive from primary caregivers influences the infants' ability to attach to other



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human beings (Sroufe 1996), regulate their impulses, communicate with others, and engage in cognitive pursuits. Skills crucial to success in school, including the ability to regulate one's urges (inhibition), the ability to hold some information in mind while attending to something else (working memory), and the ability to switch attention or mental focus (cognitive flexibility), are shaped through the give and take of the relationships in which babies engage during the first two years of life (Thompson 2009).

Such critical features of learning as a child's use of relationships in learning, the confidence of a child to engage in the challenge of learning, the ability of a child to persist while learning, and the alacrity to use adults as models for learning are already taking form by age two (Shonkoff and Phillips 2000). Similarly, emotion-based experiences during the earliest months are critical to the establishment and maturation of the neural mechanisms involved in self-regulation (Spence, Shapiro, and Zaidel 1996). Interac-

tions with adults and peers, particularly during the second year of life, are also critical to the development of impulse control.

Stanley Greenspan argues that early emotions drive skill development not only in social/emotional, but in all developmental domains. His early work demonstrated that intellectual development is stimulated by early emotional exchanges. According to Greenspan, "It is the pleasure and delight that babies get from interaction with people that drive them to relate to people more frequently and more skillfully" (Greenspan 1990: 17).

Recent research indicates that a baby's emotional need to build, sustain, and use relationships drives language use (Schore 2001, 2005). Beginning in the last trimester of pregnancy and continuing to about 24 months of

age, the right hemisphere of the brain, which regulates one's experience of the emotional and corporeal self, undergoes a growth spurt and grows faster than the more verbal left hemisphere does. During this period of intense right-brain activity, the emotional communications between a caregiver and child indelibly shape the brain (Schore 2001, 2003,

2005; Spence, Shapiro, and Zaidel 1996).

WHAT BABIES NEED

A baby's emotional interactions with a familiar, predictable, responsive, primary caregiver create a sense of security, a base from which learning can take place. An available and attentive caregiver can, through reading a baby's cues and responding appropriately, minimize an infant's negative states. But caregivers do much more. Through interactive play and back-and-forth communication, they stimulate in the baby positive emotional states and also curiosity, exploration, and communicative engagement (Raikes 1993, 1996; Raikes and Edwards 2009). Early relationships are so crucial to development in all developmental domains that they are, after meeting basic needs for nurture, health, and safety, the primary environmental ingredient for healthy brain development (Meaney 2001).

Most school-readiness experts, particularly those with K-12 backgrounds, have de-emphasized emotional and social experiences as "softer" and less significant influences on school success than, for example, the early attainment of numeracy and literacy skills. However, the first building blocks of learning are laid down during the first two years of life through early social and emotional exchanges, and future learning is built on this foundation. Policy makers and educators need to learn that — without careful attention to the quality of a child's emotional and social exchanges during the first two years of life — any school-readiness or achievement-gap intervention will be starting either in the wrong place or at the wrong time.

In addition to starting early, educators need to start differently. Babies do not learn in the same way that older children do. Thus, it is inappropriate to simply extend the core standards and teaching strategies used with school-age children down to younger children. Alison Gopnik explains that the type of learning used in schools — where adults set objectives and goals for children and try to get the children to focus on the skills and content — does not meet babies' needs:

Babies aren't trying to learn one particular skill or set of facts; instead, they are drawn to anything new, unexpected, or informative. . . . Babies are designed to explore and they should be encouraged to do so. Parents and other caregivers teach young children by paying attention and interacting with them. (Gopnik 2009: 2)

Educators need to be thoughtful in how they relate to this unique period of life. What helps get babies equipped for school looks different than most commonly practiced educational interventions. Therefore, any generalization from successful prac-

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tices with older children downward to treatment of babies should be viewed with suspicion unless those practices have been found to fit with what we have recently learned about early development and learning.

WHAT BABIES CURRENTLY GET

American babies, compared with those from other developed nations, are getting inadequate prenatal care, less time at home with their parents during the first year of life (a crucial period for bonding and attachment), and inadequate — sometimes damaging — child care that gives little attention to what and how they are learning. Even though various American professional groups endorse prenatal risk screening and prenatal health education, such services are provided too infrequently in the United States. When services are available, they are fragmented, and mothers are often unable to pay to access them.

Though we know that the brain of a fetus is quite vulnerable to inadequate nutrition, exposure to toxins, and maternal stress, this country does little to assist mothers. In many other countries, assistance during pregnancy and comprehensive health services after delivery are commonplace. Mothers in 32 countries receive universal, public support for health and social services throughout their pregnancies. Later education interventions build on and are influenced by such supports.

Also thwarting the development of many American children is the interruption of emotional connections and exchanges during the early months of life. In the United States, parents often place their children in child care at very young ages, arguably far too young. Every day, nearly six million U.S. children under the age of three spend part of their day being cared for by someone other than a parent (Cohen and Ewen 2008). By six months of age, about half of American infants are in some kind of regular childcare arrangement (Flanagan and West 2004). Thirty-nine percent of American children start care when they are younger than three months of age, 47% between three and six months, and 14% when they are older than nine months.

Every industrialized country in the world, except the United States, provides for paid, universal leave for parents before, at, and after the birth of a child — and in many cases, for the entire first year of a child's life. In contrast, the U.S. Family and Medical Leave Act (FMLA) provides only 12 weeks of *unpaid* leave to about half of mothers in the country, and nothing for the remainder. Only six states provide parental leave. According to the National Center for Children in Poverty, America ranks “among the worst” in supporting mothers to spend time at home with their newborns. In its study of 173 countries, America stood with Liberia, Swaziland, and Papua

New Guinea as the only countries providing no paid maternity leave (Stebbins and Knitzer 2007).

Other countries also offer infant care services for all newborns to help new parents understand and adjust to the needs of their babies. All northern and western European countries provide home visits after childbirth by healthcare professionals (Kamerman and Kahn 1993). In the Netherlands, a continuous one-week homecare program covered by insurance for normal birth mothers is provided by *Kraamverzorgsters*, who receive a three-year training program. This postpartum home care includes housework services in addition to care for children and mothers (De Vries et al. 2001).

In Victoria, Australia, every mother and her newborn is visited at home five days after giving birth, and contact with a nurse-educator continues free of charge until the child is 18 months old. The home nurses report that they not only help with normal questions about breast feeding and sleep, but they also address issues that arise early in the life of a baby that can derail emotional attunement, such as the ability to read the child's cues and respond accordingly. They also identify, serve, and refer to appropriate services those parents who do not provide the emotional climate babies need. Such services, available to all Victorian families regardless of income, have been available since 1920.

In a recent study by the National Institute on Child Health and Human Development (NICHD), the quality of child care correlated positively with the child's cognitive-academic benefits at age 4½ and age 15 (Vandell et al. 2010). And students in countries that provide universal early development programs tend to academically outperform their peers in countries in which such programs are sporadic or nonexistent (McCain, Mustard, and Shanker 2007).

Unfortunately, U.S. child care is often of poor quality. The NICHD study, for example, rated only 17% of American infant and toddler care of high quality. A similar national study found that less than



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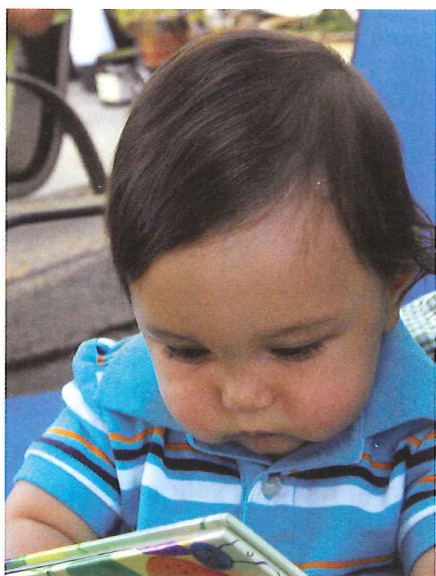
10% of infant and toddler care was of high quality, and 40% was actually *harmful* to children (Cost, Quality, and Child Outcomes Study Team 1995).

One reason that U.S. child care is so poor is that high-quality care is expensive.

The average cost of infant care (any level of quality) ranges from about \$4,400 to \$14,600 per year, depending on where a family lives (NACCRRRA 2008). In the United States, families pay an average of 80% of total childcare costs, while European families pay an average of 30%.

Another reason for the poor quality of U.S. child care is the high turnover of childcare workers. We know from research that sound emotional development and learning require consistency of care and of caregivers, but there is a 75% turnover in the staff of childcare centers every four years. Part of the reason may be the abysmal wages for childcare workers. In 2006, the national average annual wage for a childcare worker was \$18,820 (NACCRRRA 2007). That is less income than fast-food workers, car parkers, or dog walkers receive.

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WHERE DO WE GO FROM HERE?

If we are to successfully address school readiness issues and the achievement gaps between American students and their peers throughout the world, we must address the early development of our children. That means that we must begin our interventions during pregnancy and continue until the child enters school. The following recommendations would give our nation's children the support they need.

Health insurance. Because critical components of brain development occur during pregnancy, the healthy development of the child while in the womb needs to be supported. Universal health coverage for all families, regardless of income, is recommended.

Prenatal care and support. Expectant mothers (and the babies' fathers) need to be prepared for both delivery and parenting. And the negative effects of environmental toxins, family stress, and other health issues should be buffered by universally accessible professional and paraprofessional support during pregnancy.

Paid parental leave. Because babies need positive attachment relationships for early brain development, paid parental leave should be available to all families with a newborn for at least the first six months of the child's life.

Primary and preventive care. Because the fragile relationships established between babies and their primary caregivers are so critical to positive child development, the following services need to be in place: visits to the homes of all newborns, guidance for parents to support children's healthy development, developmental screenings to identify physical and behavioral needs, and special services for families in crisis.

Childcare regulations and policies. Because many children establish significant relationships during the first two years of life with caregivers outside their home who are not members of their family, strong childcare regulations need to be put in place. We must ensure that care is provided in safe, interesting, and intimate settings where children have the time and opportunity to establish and sustain secure and trusting relationships with other children and with knowledgeable caregivers who are responsive to their needs and interests. Some of the essential elements that must be guaranteed are small groups, low adult-to-child ratios, personalized care, trained caregivers, and continuity of infant/caregiver relationships.

Fair wages for professional childcare providers. All caregivers must be educated in early childhood development and must know how to provide appropriate care. In return, those who care for our youngest children should expect to be compensated just as well as school teachers are.

Infant/toddler childcare subsidies. To ensure that babies receive care that will contribute to healthy brain development, their parents must be supported so that they can buy the high-quality child care their children deserve. Low adult-to-child ratios, small group sizes, and high-level caregiver skills will not come cheaply, but it is quite clear that we are in a "pay now or pay more later" situation.

We need a change in our country's approach to "getting kids ready for school." However, we need to remember that what helps get babies equipped for school looks different than most education interventions. We can't just extend the grade school curriculum to younger and younger ages. This is an especially relevant warning now, as the Council of Chief State School Officers and the National Governors Association prepare to extend their K-12 Common Core Standards to the birth-to-kindergarten age range.

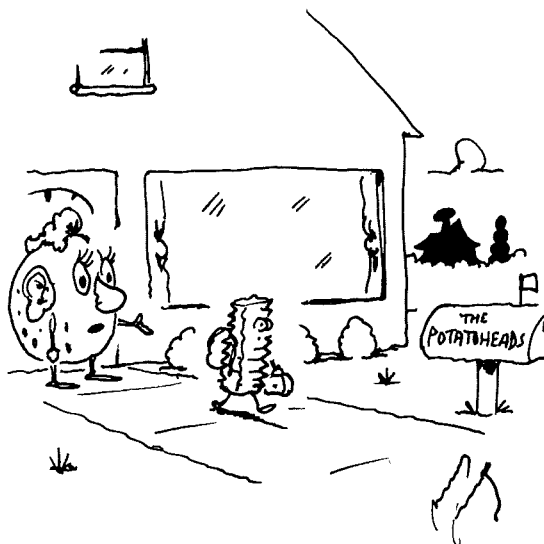
Working to improve the learning capacities of children should start early and give special attention to the emotional components of a child's first relationships. If high-quality care is provided to all babies, the chances of many more children having a

successful school experience will be dramatically increased.

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"Remember, Timmy, go straight to school, and no taking ketchup from strangers."