

# Significance of the Early Childhood Indicator to Reading Proficiency by Goal

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The indicators identified here have been shown by research to be directly related to children’s ability to read proficiently by third grade. Most, but not all, have data bases that are available for us to track community level data. We do not have current capacity to collect data on two important predictor indicators; parents reading to their young children and summer reading loss. There are numerous citations throughout this document, however it is not intended to be a complete literature search, but to give us guidance and direction as we work together to design effective policies, actions and programs to help children become proficient readers. One document provided us the framework and some of the research so we cite that here; Pathway to Children Ready for School and Succeeding at Third Grade, Lisbeth Schorr and Vicky Marchand, Pathways Mapping Initiative, June 2007. Emerging indicators have a research base, but our current ability to track the indicator in Hawaii is insufficient.

**Goal 1: Healthy and Well Timed Births**

**I. Outcomes:**

1. There is high quality accessible prenatal care
2. There is access to high quality family planning services
3. Youth understand the importance of deferring child rearing until they graduate from high school

Indicator	Significance of the Indicator to School Readiness
<p><b>Birth Outcomes</b></p> <ul style="list-style-type: none"> <li>a. % of infants born under 2500 grams</li> <li>b. % of births born &gt; 39 weeks</li> </ul>	<p>Being born at a low birth-weight is a risk factor for developmental problems, including early problems in school. Children aged 4 to 17 who were born at low birth-weight were more likely to be enrolled in special education classes, to repeat a grade, or to fail school than children who were born at a normal birth-weight (McCormick, Gortmaker, &amp; Sobol, 1990). Very low birth-weight newborns face an even high risk of developmental complications and delays than low birth-weight babies.</p>
<p><b>Mother’s Education Level:</b> % of births to mothers with less than a 12th grade education</p>	<p>Newborns whose mothers have low levels of education are more likely than newborns of more educated mothers to have been exposed prenatally to cigarette smoke, alcohol, drugs, and folic acid deficiencies which can cause pre term births and longer lasting effects on cognition and behavior.( AEC Early Warning, Council of Chief State School Officers, Nov. 2009)</p>
<p><b>Births to Teens:</b> # of births to moms under 20 per 1,000 girls</p>	<p>Parental age is significantly related to child well-being. Children of teenage mothers have lower levels of cognitive and educational attainment, lower levels of academic achievement, and higher levels of behavioral problems than children born to mothers age 20 and over (Hofferth, 1987;Maynard, 1997; Moore, Morrison, &amp; Greene, 1997).</p>

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Emerging Indicator	Significance of the Indicator to School Readiness
<b>Prenatal exposure to tobacco</b>	The likelihood of being school ready is 10 percentage points lower for children whose mothers smoke during pregnancy. Poor children are at higher risk of prenatal tobacco exposure. Maternal smoking during pregnancy is associated with behavior problems, but does not affect math, reading, learning-related behaviors or physical health; children of smokers are also at risk for antisocial behavior (Isaacs, 2012).
<b>Prenatal Drug and Alcohol exposure</b>	Prenatal drug or alcohol exposure can place the fetus at risk for a variety of negative outcomes, including: poor coordination and problems with learning (Stratton, et al., [eds.], 1996); and low birth-weight and delays in mental skills during toddler years, compared with children not exposed prenatally to such drugs (Substance Abuse and Mental Health Services Administration, 2001). Children prenatally exposed to drugs and raised in homes with ongoing parental drug use are more likely to display problems with cognitive development when compared with prenatally drug-exposed children raised in drug-free environments (Griffith, et al., 1994; Hawley, et al., 1995).

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## Goal 2: Health and Development on Track

### I. Outcomes:

1. There is high quality accessible child health care; children have a medical home
2. There is early detection of developmental obstacles
3. There is prevention of and protection from abuse and neglect

Indicator	Significance of the Indicator to School Readiness
<p><b>Breast Feeding:</b> % of mothers who breast feed their infants at 6 mos. Of age</p>	<p>Breastfeeding has both physical and emotional benefits for infants. Breastfeeding has a range of protective effects including decreasing the incidence and/or severity of respiratory, ear, and digestive infections, and diabetes; it probably also reduces the incidence of sudden infant death syndrome, and allergic reactions. Breastfeeding promotes frequent tender physical contact between mother and infant and may also be related positively to children’s cognitive development (American Academy of Pediatrics, 2002; National Center for Health Statistics, 2001; Morrow-Tlacak, Haude,&amp; Ernhart, 1988; Wang. &amp; Wu, 1996).</p>
<p><b>Health Screening :</b> % of 2-year-olds with a recent well-child visit that included a lead, vision, hearing, and mental health screening</p>	<p>Lack of access to <b>early detection and treatment of hearing and vision problems</b> raises the chances that health barriers will limit children’s ability to fully engage in home, school, community, or social activities (U.S. Department of Health and Human Services, 2000). Normal or corrected hearing and vision contribute to coordinated movement, which is essential to school readiness (Kagan, et al., 1995). Early detection and treatment of vision problems may prevent developmental delays and further visual deterioration, since vision that is lost cannot be restored (U.S. Department of Health and Human Services, 2000).</p>
<p><b>Childhood Obesity:</b></p> <ol style="list-style-type: none"> <li>a. children ages 2-5 receiving WIC services with a BMI at or above 85 percentile</li> <li>b. children at kindergarten entry with a BMI at or above 85 percentile?</li> </ol>	<p>When children are not within their expected height and weight ranges, they may be suffering from malnutrition, impairments in the caregiver-child relationship, or chronic illness. Being either obese or underweight in infancy or early childhood can have long-term health and social consequences (Dawson, 1992; Kagan, et al., 1995).</p>
<p><b>Child Abuse and Neglect:</b> Rate of substantiated child abuse and neglect among children birth through age 3</p> <ul style="list-style-type: none"> <li>• Physical</li> </ul>	<p>Children who have been neglected or physically abused are more likely to have <b>cognitive and emotional problems</b>, to suffer from attention deficit disorder, depression, conduct problems, and limits in cognitive development and functioning (<i>Mental Health: A Report of the Surgeon General</i>, citing Kaufman, 1991 and Famularo, et al., 1992). Abuse and neglect are linked with language deficits,</p>

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<ul style="list-style-type: none"> <li>• Neglect</li> <li>• Sexual</li> <li>• Threatened harm</li> </ul>	<p>reduced cognitive functioning, and attention deficit disorders (Augostinos, 1987; Eckenrode, et al., 1991; Fantuzzo, 1990; Guterman, 2001; Wolfe &amp; Mosk, 1983)</p> <p>Children who have been neglected or physically abused tend to <b>perform poorly in school</b>, as evidenced by low grades, low standardized test scores, and frequent retention in grade; the negative effects are even greater for neglected than for abused children (Chalk, Gibbons, &amp; Scarupa, 2002). They tend to have lower grades, lower standardized test scores, and lower rates of grade promotion (Augostinos, 1987; Eckenrode, et al., 1991; Guterman, 2001; Wolfe &amp; Mosk, 1983).</p>
<b>Emerging Indicator:</b>	<b>Significance of the Indicator to School Readiness</b>
<p><b>Medical Home:</b> % of children 0-5 who meet the AAP five components for determining medical home status</p>	<p>When a family has a regular medical care provider for check ups, shots, and anticipatory guidance, children are more likely to receive prompt and appropriate care for acute and chronic conditions, as well as continuing preventive care. Consistent care by the same individual, or group of individuals, ensures monitoring of and familiarity with children’s health over time, awareness of the family, and also may avoid delayed diagnosis of health and developmental problems, worsening of existing conditions, and the occurrence of preventable conditions (Chen, Matthews, &amp; Boyce,2002; Kagan, et al., 1995).</p>
<p><b>Developmental Screening:</b></p> <ul style="list-style-type: none"> <li>a. % of children under six with a comprehensive developmental screening within the previous year and</li> <li>b. % of children screened positive receiving early intervention</li> </ul>	<p><b>Early interventions with children at high risk</b> can improve their social competence and cognitive abilities prior to school entry. Often, long-term educational benefits can be reaped from effective early intervention programs (Karoly, et al., 1998; Reynolds &amp; Wolfe, 1997; Berlin, O’Neal, &amp; Brooks-Gunn, 1998). The children of less-skilled and more vulnerable mothers derive more benefits from early intervention than children of better-educated mothers (Berlin, O’Neal, &amp; Brooks-Gunn, 1998). Early identification of young children’s special needs allows early childhood programs to adapt to these children’s needs and strengths and to ensure that students with physical, sensory, or cognitive disabilities can learn.</p>
<p><b>Dental Care:</b> % of children 2-5 with a dental check up within the last twelve months.</p>	<p><b>Poor dental care</b> may lead to tooth loss, dental caries, and gingivitis, resulting in high rates of absenteeism, inability to concentrate in school, and poor speech development. Dental problems may also impair a child's ability to eat correctly and therefore to achieve good nutrition and health (Platt &amp; Cabezas, 2000; Platt &amp; Cabezas, 2000; Kagan, Moore, &amp;Bradekamp, 1995.)</p>

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## Goal 3: Supported and Supportive Families

### I. Outcomes:

1. There is support for parents to strengthen parent capacity and literacy skills
2. There is high quality care for parents with substance abuse, mental health or domestic violence
3. There are fewer children in low income, single parent families
4. Neighborhoods are safe, stable and supportive

### II. Indicators:

Indicator	Significance of the Indicator to School Readiness
<p><b>Supports for Families with Infants and Toddlers:</b> % of vulnerable infants and toddlers 0-3 in the community who are enrolled in a home visiting or parent interaction program.</p>	<p><b>Connections to responsive and supportive networks, services, and institutions can buffer the stressful context created by poverty</b>, which threatens positive interactions with children and raises the potential for punitive or otherwise negative relationships (National Research Council, 2000). Lower levels of parental stress and family conflict are connected to positive child outcomes, including social ability, literacy, and school readiness (Fenichel &amp; Mann, 2002).</p> <p><b>Connections to responsive and supportive networks, services, and institutions can increase knowledge and understanding of proper child development and parental behavior</b> for parents of infants, which is likely to lead to improved outcomes in social development and school readiness (Fenichel &amp; Mann, 2002). Such connections can help parents improve the manner in which they interact with children, the physical environment of the home, and their emotional health, all of which are associated with a child's cognitive, social, and emotional development (Radke-Yarrow, et al., 1992).</p>
<p><b>Low Income Young Children:</b> % of elementary children participating in the free and reduced lunch program (185% the federal poverty guidelines for Hawaii).</p>	<p>Child poverty is linked with a range of negative outcomes including diminished academic achievement, more health problems and lower nutrition, and lower overall well being. Children from extremely poor families tend to have lower cognitive skills including reading, problem solving, and concentration ability, and experience greater developmental losses during the non-academic year (Brooks-Gunn, Britto, &amp; Brady, 1999; McLoyd, 1998; Moore &amp; Redd, 2002; Seccombe, 2000; Stipek &amp; Ryan, 1997) The study, <i>Inequality at the Starting Gate</i>, found children in highest socioeconomic group cognitive scores at kindergarten entry were 60% above children of lowest socioeconomic group (Lee &amp; Burkam, 2002, in <i>Pathways to Early School Success</i>, NCCP, 2006. Almost all research points to the conclusion that the hardships of poverty pose the greatest risk factors for poor academic success and income, indicating a linear relationship between academic success and income (see Klein &amp; Knitzer, 2006). <b>Family income in</b></p>

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	<p><b>early childhood matters for children's academic achievement</b> (Duncan &amp; Magnusen, 2003), particularly for children in low-income families. Children who experience poverty before age 5 have fewer total years of schooling, more school failure, and more dropout (McLoyd, 1998). Children in poor families score lower on standardized tests of verbal ability (Brooks-Gunn, et al., 1999).</p>
<p><b>Single Parent:</b> % of children under 6 living in a household headed by a single parent</p>	<p>Families with two married parents provide a more stable home environment, have fewer material hardships (such as insufficient food, inadequate housing, or lack of utility services), and live fewer years in poverty than single-parent families (The Urban Institute, 2002). Conversely, children born to unmarried mothers in single-parent households are likely to have lower educational attainment than their counterparts in dualparent households (Aquilino, 1996). Households in which parents are cohabiting are less stable than households in which parents are married (Axinn &amp; Thornton, 1992).</p>
<p><b>Linguistic Isolation:</b> % of households in which no one 14 and over speaks English only or speaks a language other than English at home and speaks English "very well"</p>	<p>Vocabulary development by age 3 has been found to predict reading achievement by third grade. Preschoolers whose parents (especially mothers) read to them, tell stories or sing song tend to develop larger vocabularies, become better readers and perform better in school. Annie E. Casey, <i>Early Warning, 2010</i>; Hart &amp; Risley, 1995.</p> <p>Research is showing that limited English proficient children can be successful if they are supported in developing their home language while using their new language in school (Espinosa, 2005).</p>
<p><b>Crime Rate: annual crimes per 1000 residents</b></p> <ol style="list-style-type: none"> <li>1. Violent</li> <li>2. Property</li> </ol>	<p><b>Greater neighborhood safety, stability and supportiveness can reduce exposure to the violence that puts children at higher risk</b> for psychiatric problems, aggression, emotional distress, immature behavior, and poor school performance. Neighborhood safety and stability can reduce the some of the stresses that interfere with good parenting (Jenkins &amp; Bell, 1997; Singer, et al., 1995; Zuckerman &amp; Kahn, 2000).</p> <p><b>Neighborhood conditions that increase stress, such as crime and drug selling, may directly affect parents' ability to nurture and protect their children</b> by creating anxieties that interfere with good parenting (Furstenburg &amp; Hughes, 1994; Korbin, 1994). Perceived neighborhood safety is important for child development since it affects the willingness of parents to take advantage of resources such as parks, libraries, and children's programs (National Research Council, 2002).</p> <p>Parents in unsafe neighborhoods may protect their children by restricting their movement (Lipsey &amp; Wilson, 1993), which may affect the child's cognitive stimulation, physical fitness, and ability to establish</p>

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	a sense of autonomy (Osofsky, 1995).
<b>Stable Housing:</b> % of annual student population who have changed schools two or more times in the previous year.	<p>Residential mobility affects children’s social capital and ability to learn because of disruptive absences from school, discontinuity of teaching styles, and insecure social relationships. Families that move frequently may be less successful at developing social ties and may be unfamiliar with available resources to help their children (Aquilino, 1996; Case &amp; Paxson, 2006; Hango, 2006; Pettit &amp; McLanahan, 2003; Wood, et al., 1993)</p> <p>Mobility rates are higher among low income households and not only affect their educational outcomes but for the school as a whole. Students who have changed schools two or more times in the previous year are half as likely as their stable peers to read well. Annie E. Casey , Early Warning, pages 20-21</p>
<b>Emerging Indicator:</b>	<b>Significance of the Indicator to School Readiness</b>
<p><b>Domestic Violence:</b></p> <ul style="list-style-type: none"> <li>a. Mother has experienced intimate partner violence in the 12 months before or during pregnancy.</li> <li>b. # of children 0-3 exposed to domestic violence</li> </ul>	<p>Many DV exposed children show more aggressive and antisocial as well as fearful and inhibited behaviors, exhibit lower social competence, and have poorer academic performance (Kitzmann, Gaylord, Holt &amp; Kenny, 2003; Wolfe, Crooks, Lee, McIntyre-Smith &amp; Jaffe, 2003). Children also show similar emotional health to those of physically abused children (Kitzmann et al., 2003). Other children display more resiliency to the negative effects of exposure and have no greater social or emotional problems than those not exposed to domestic violence (Graham-Bermann, 2001). The more social support networks and family members in protective roles available to the child, the more resilient a child may become (Masten &amp; Reed, 2002).</p> <p>Research suggests that quality early care and learning experiences can help all low-income children succeed in school. For young children exposed to domestic violence, such experiences can provide a safe haven through which they can thrive.</p> <p style="text-align: right;"><a href="http://www.ncccev.org/pdfs/series_paper2.pdf">http://www.ncccev.org/pdfs/series_paper2.pdf</a></p>
<p><b>Maternal Depression</b></p> <ul style="list-style-type: none"> <li>a. % of mothers experiencing perinatal or post partum depression</li> <li>b. HHVN mothers screened for depressive symptoms</li> </ul>	<p>Depression, attachment difficulties, and post-traumatic stress, prevalent among mothers living in poverty, undermine mothers' development of empathy, sensitivity, and responsiveness to their children—often leading to poorer developmental outcomes (National Research Council, 2000). Children who have clinically depressed parents or parents reporting signs of depression are at risk for a variety of negative outcomes, including health, cognitive, and socio-emotional problems (Child Trends, 2002), behavioral problems, poorer performance on math and reading assessments (U.S. Department of Health and Human Services, 1999), and poor emotional adjustment as they grow up (Korenman, Miller, &amp;</p>

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	<p>Sjaastad, 1994; Miller, 1998). Their parents have poorer parenting skills, and fewer cognitive, stimulating, and supportive interactions with their children (Downey &amp; Coyne, 1990; Zaslow, et al., 2001).</p>
<p><b>Foster Care Placement Stability:</b> % of children birth to age 6 in out-of-home placement (foster care) who have more than two placements in a 24-month period</p> <p>Track by type of placement; Stranger, Relative</p>	<p>In California students across grade levels with a history of foster care placement perform 16 to 20 percentile points below students who are not in foster care.</p> <p>Increasing placement stability has been shown to be the most significant factor in improving mental health outcomes for foster children.</p> <p style="text-align: right;">Chapin Hall Center for Children at the University of Chicago. (2007). Midwest Evaluation of the Adult Functioning of Former Foster Youth.</p> <p>“At the request of the New York City Administration for Children’s Services (ACS), and in collaboration with the city’s Board of Education, we examined the relationship between children’s foster care experiences and their performance in school. Using a combined database of school and child welfare records on more than 16,000 foster children, we compared children’s attendance rates, school transfers, and third through eighth grade test scores according to their foster care experiences, including length of stay in care, type of foster home, runaway history, placement history, reason for placement, and year of entry into care.</p> <p>Foster care experiences had the strongest effect on attendance and school transfers but only minor effects on children’s reading and math exams. In light of the weak evidence in our study that school transfers reduce test scores or attendance rates, we placed greater weight on the attendance findings than the school transfer findings in drawing our conclusions about how foster care experiences influence school performance.</p> <p>We found that while foster children have very poor attendance rates compared to students in the general population, several groups of children improved their attendance after they entered foster care, including those who were young, entered care because of abuse or neglect, remained in care for at least the entire school semester after they entered, had stable placements, and were placed in family-like homes. These children’s foster care experiences appear to increase this aspect of school stability, which in turn promotes learning and achievement.</p> <p>Other children’s attendance dropped after foster care placement. In particular, attendance declined for children who had short stays in foster care or who returned home during the school semester. This finding suggests that discharge planning conferences should consider the possible risks associated with returning children home during the school session and that they ensure sufficient aftercare services to help families maintain their children’s school stability.”</p> <p style="text-align: right;">Vera Institute of Justice, 2001 New York City Administration for Children’s Services</p>

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## Goal 4: High Quality Child Care and Early Education

### I. Outcomes:

- a. High quality child care and early education are widely available and support social and cognitive development
- b. Child care is linked to health, mental health, and developmental services

Indicator	Significance of the Indicator to School Readiness
<p><b>Physical Well-being and Motor Development:</b> % of children at kindergarten entry with age appropriate fine motor skills (show small muscle control (e.g. use of pencils, drawing art tools).</p> <p><b>Social and Emotional Development:</b> % of children at kindergarten entry who work and play well with others.</p> <p><b>Mathematical Skills and Knowledge:</b> % of children at kindergarten entry with age-appropriate math concepts and skills (counts set of 5 objects, sorts and classifies objects, recognizes and can duplicate simple patterns)</p> <p><b>Language Development:</b> % of children at kindergarten entry with age-appropriate literacy concepts and skills at kindergarten entry (knows names &amp; sounds of more than 3 letters)</p> <p><b>Approaches to Learning :</b> % of kindergarten students who possess attitudes and habits that facilitate learning (listen to group discussions/stories; follow classroom routines, are eager to learn, try hard and persist, show interest in world around them)</p>	<p><b>Importance of the Domains: From <i>Getting Ready, Rhode Island Kids Count, 2005</i></b></p> <p><b>Physical and Motor Development:</b> Fine motor skills influence success in many of the activities in a preschool program. Lack of fine motor skills can make it difficult to hold a pencil, limiting early efforts at printing letters and drawing. Fine motor skills also influence eye movement and can predict reading, mathematics, and general school achievement. (Tramontana et al, 1988; National Research Council, 2001). Children vary substantially by sex, mother’s education, and race/ethnic category for both fine and gross motor skills (National Research Council, 2001).</p> <p><b>Social and Emotional Development</b> Young children’s social and emotional development is the foundation for, and intertwined with, their cognitive development (see NCCP, 2006). Children are more likely to do well in school when they have a positive sense of personal well-being, developed through consistent, caring relationships in their early years. Emotional support and secure relationships build a child’s self-confidence and the ability to function as a member of a group. Healthy social and emotional development comes from stable interactions and nurturing environments during infancy and childhood that form the base for self-confidence, self-management, and the ability to get along well with peers and adults.(Shonkoff &amp; Phillips, 2000; Knitzer &amp; Lefkowitz, 2005)</p> <p>An age-appropriate ability to manage emotions, relate to others, and understand the emotional cues of other facilitates the development of early literacy and math skills. Young children with anti-social or aggressive behavior in early school years do less well at academics, are more other held back, and are at risk for dropping out (Raver &amp; Knitzer, 2002).</p> <p><b>Language and Literacy:</b> Language proficiency is a key predictor of school success. Children’s emergent literacy skills at kindergarten entry predict their reading abilities throughout their educational careers. Some elements of emergent literacy include vocabulary, print awareness, early writing, and recognition of the connection between letters and sounds. Children who began to learn content that included print, sounds and writing during the preschool period were more likely to be ready to read at the end of kindergarten and reading successfully in elementary school (Whitehurst, 2004).</p>

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	<p>Children exposed to a rich language environment in the early years acquire a significantly larger vocabulary, stronger knowledge of the words and structures that articulate ideas, and better capacity to use language to interact with others. The depth of children’s language and literacy skills are directly related to their early experiences with books, story-telling and conversation. Early exposure to literacy activities at home, in the community, and in early childhood education programs is essential to young children’s development of reading and communication skills. Early language and reading skills such as vocabulary, knowing letters, words, and beginning and ending word sounds consistently predict later achievement (Duncan et al., 2007).</p> <p><b>Cognitive Skills:</b> The cognitive skills that grow out of a child’s everyday experiences are what help children to acquire new knowledge and information. From these experiences, children learn to observe, recognize differences and similarities, ask questions, and solve problems. The best foundation for later learning is provided when children have multiple and varied opportunities to interact with their environment and are encouraged to learn from their experiences. Cognitive development encompasses language and literacy, mathematical knowledge, scientific thinking, the arts, music and other vehicles for knowledge acquisition, creative expression, reasoning and problem solving. Recent research supports the importance of exposing young children to mathematical experiences during the preschool years - early math concepts such as knowledge of numbers and ordinarily are powerful predictors of later learning (Duncan et al. 2007; Ginsberg et al, 2006).</p> <p>Success in school also depends on the <b>child’s approaches to learning</b>, including learning styles, habits and attitudes. Approaches toward learning are the various inclinations, dispositions, and styles that children use to become involved in learning. Early learning is enhanced by curiosity, creativity, independence, cooperativeness, and persistence. Young children vary widely in their approaches to learning. Some children may be very open to new learning tasks while others may be slower to experiment or take on new challenges. All children can succeed when their care-givers and teachers understand the various ways that different children approach learning and encourage their engagement (see also National Education Goals Panel 1994, 1997; Child Trends 2002). The ability to control and sustain attention as well as participate in classroom activities is associated with later academic achievement independent of cognitive ability (Alexander, Entwisle, &amp; Bauber, 1993; Raver, Smith-Donald, Hayes, &amp; Jones, 2005; Duncan et al., 2007; Georges, Brooks-Gunn &amp; Malone, 2012).</p>
<p><b>Access to Child Care Subsidies:</b> % of low-income children under age 5 receiving child care subsidies</p> <p>% of low-income and/or special needs children ages 3 and 4 with subsidized preschool enrollment</p>	<p><b>For families that receive no help paying for child care, or whose assistance is inadequate, the results are often not good for children or their working parents.</b> The federal Child and Dependent Care Tax Credit currently defrays only a small share of the cost of child care: 20% to 35% of the first \$3,000 for one child or \$6,000 for two or more children, and families with incomes below \$20,000 receive less than 1% of its benefits. Low-income working families that pay for child care purchase cheaper care than do high income families, and they often wind up with lower-quality care (Center for American Progress Task</p>

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	<p>Force on Poverty, 2007).</p> <p><b>Low-income children benefit from preschool experiences.</b> Experimental and descriptive research shows that high-quality early-learning programs produce gains in learning and achievement that is most effective for low-income children (NICHD Early Childhood Research Network, 2002 and 2005; Rathbun &amp; West, 2004; Guarino et al, 2006; Loeb, Fuller, Kagan &amp; Carrol, 2004; Hill, Brooks-Gunn &amp; Waldfogel, 2003).</p>
<p><b>Accredited Child Care</b></p> <ul style="list-style-type: none"> <li>• % of child care centers accredited by the National Association for the Education of Young Children (NAEYC)</li> <li>• % of total child care spaces in NAEYC accredited centers</li> <li>• % of family child care homes accredited by the National Association for Family Child Care</li> </ul>	<p>Participation in high-quality early childhood programs helps prepare children for school and has long-term impacts on children’s ability to learn and develop peer relationships. Young children in high-quality programs tend to have decreased rates of grade repetition, fewer referrals to special education services, and higher levels of cognitive and social development. Additionally, participation in high-quality early education programs helps mitigate cognitive learning disparities between children from high and low SES backgrounds (Barnett, 1995; Belsky, et al., 2007; Early Childhood Longitudinal Study, 1999; EdWk Quality Counts, 2007; Gormley &amp; Gayer, 2005; Lee, et al., 1995; National Household Education Survey, 1991; National Household Education Survey,1999; National Longitudinal Survey of Youth, 1979; National Research Council, 2000; Peisner-Feinberg, et al., 2000; Reynolds, 1994; Sheehan, et al., 1991; Shonkoff &amp; Phillips [eds.], 1999;Warash &amp; Markstrom-Adams, 1995).</p>
<p><b>Class Size:</b></p> <ul style="list-style-type: none"> <li>a. % of preschool classrooms that meet NAEYC standards for adult child ratio and class size</li> </ul>	<p><b>Staff-to-child ratios are one of the more sensitive indicators of quality of care, across settings and for both younger and older children</b> (Howes, et al.,1992; National Research Council, 2000; Galinsky, 2006). Children who are enrolled in child care programs with low student-to-teacher ratios score higher on tests of language and cognition (Adams, 1990). Providers in these programs are better able to give sensitive and stimulating care, and children appear less apathetic and distressed (National Research Council, 2000; Vandell &amp; Wolfe, 2000). Conversely, children in settings with high child-adult ratios were more likely to be uninvolved in classroom activities (Love,1993).</p>
<p><b>Special Needs Inclusion:</b> % of children in preschool special education who are in inclusion settings.</p>	<p><b>A principle of the law requiring education for children with disabilities (IDEA) is to educate children in the least restrictive environment with children who are not disabled (IDEA Title I B 612 a 5, 2004).</b> The desired results of inclusive experiences for children with and without disabilities and their families include a sense of belonging and membership, positive social relationships and friendships, and development and learning to reach their full potential (DEC &amp; NAEYC, 2009). Inclusion takes many forms, and children in inclusive programs generally do at least as well as children in specialized</p>

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	<p>programs. Inclusion can benefit children with and without disabilities, particularly with respect to social development. Specialized instruction is an important component of inclusion and a factor affecting child outcomes (NPDCI, <i>Research Synthesis Points on Early Childhood Inclusion</i>, 2007).</p>
<p><b>Teacher Salaries:</b> A greater number child care providers and early education teachers receiving higher salaries as a proportion of the overall number of child care providers in a specified area.</p>	<p>Higher wages for child care workers are associated with better quality care and lower staff turnover. While standards and compensation are interdependent issues, the fundamental availability of a skilled, stable, and high-quality workforce throughout the child care system is tied to adequate wages (Center for the Child Care Workforce, 2006; Dukakis, et al., 2007; Gormley, et al., 2005; Lamb, 1998; Pianta, Nimetz, &amp; Bennett, 1997; Shonkoff &amp; Phillips [eds.], 2000; Stremmel, et al., 1993; Whitebook, et al., 2001).</p>
<p><b>Early Education Teacher Credentials:</b> % of early childhood teachers with a bachelor's degree and specialized training in early childhood</p>	<p>Specialized education and training in child development for teachers is linked to more sensitive care-giving and better developmental outcomes for children. However, education, training, and credentialing are not consistently related to classroom quality in the presence of factors such as high turnover, large classrooms, etc. which may be stronger influences (Bellm &amp; Whitebrook, 2006; Bowman, Donovan &amp; Burns, 2001; Currie &amp; Hotz, 2001; Dunn, 1993; Early, et al., 2006; Fischer &amp; Earhart, 1991; Guralnick, 1976; NICHD Early Child Care Research Network, 1996; Whitebook, et al., 1990; Shonkoff &amp; Phillips [eds.], 2000). Current research indicates that teacher-child interactions and other classroom process quality factors must also be considered (Early et al, 2005; Pianta et al, 2005).</p>
<p><b>Emerging Indicator</b></p>	<p><b>Significance of the Indicator to School Readiness</b></p>
<p>All Early Childhood Settings provide an access point and support coordination with health and social services for young children and their families</p> <p>Effective coordination of health, mental health, family violence and substance abuse services</p> <p>Note: Need to develop indicator</p>	<p>Providers and coalitions create links among services for child care, health care, mental health, substance abuse, developmental assessment, and child protection so that they can mobilize specialized help for individual children and families who are isolated, have social, emotional, or developmental difficulties, or otherwise are at high risk. The child care setting provides <b>opportunities to identify warning signs and to link children and parents with the help they need</b> (Knitzer &amp; Raver, 2000). This is especially important because depression, attachment difficulties, and post-traumatic stress are prevalent among mothers living in poverty. In the absence of recognition and interventions, those conditions undermine mothers' development of empathy, sensitivity, and responsiveness to their children—often leading to poorer developmental outcomes (National Research Council, 2000)—and the opportunity to head off more serious, long-term consequences maybe missed.</p>
<p><b>High-Quality Child Care and Early Education Programs:</b> % of child care and early education</p>	<p><b>Quality Rating and Improvement Systems (QRIS) for Early Childhood Programs</b> are intended to improve the quality of all programs and provide families and the public with information about program</p>

# Significance of the Early Childhood Indicator to Reading Proficiency by Goal

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<p>classrooms that rank at the top level in a statewide quality rating system</p>	<p>quality. Hawaii’s QRIS will rate programs on variables that are associated with ability to produce positive child outcomes, including structural aspects and the quality of curriculum and intentional teaching, using standardized instruments (e.g. ERS, CLASS, PAS). Five dimensions of quality are included: early childhood care and education, family partnerships, diversity and inclusion, staff qualifications, and program design and management. Programs must be accredited by NAEYC or NAFCC to reach the top level.</p> <p>QRIS is currently in the pilot stage, field-testing design assumptions. Program quality improvement will be supported by professional development, coaching, and incentives such as quality awards and improvement grants.</p>
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# Significance of the Early Childhood Indicator to Reading Proficiency by Goal

## Goal 5: Continuity in Early Childhood Experiences

### I. Outcomes:

- a. Curricula and expectations are aligned among providers of early education and schooling
- b. Providers of early education, schooling, and social and health services are connected with each other and with families

Indicator	Significance of the Indicator to School Readiness
<p><b>Transition Practices Between Pre-School and School:</b> % of schools with formal working transition plans from home/preschool to kindergarten</p>	<p>Children experience a smoother transition when they enter school when there is coordination between schools, early childhood programs, and parents. When schools have a systemic relationship with parents and early childhood programs, the open communication promotes greater problem solving, language development, and learning among children, as well as reinforcing parents' comfort with their crucial roles in their children's learning process (Henry et al, 2003; Kagan &amp; Neuman, 1998; Kelin &amp; Knitzer, 2007; Lynch, 2007; Melton, Limber &amp; Teague, 1999; Pianta &amp; Kraft-Sayre, 2003; Reynolds, 2003; Reynolds, et al., 2006; Reynolds &amp; Wolfe, 1997; and, Zill, et al., 2003). Research-based transition practices are included in Hawaii's Ready Schools component of the HSSRA, see Grace &amp; Brandt, 2006.</p>
<p><b>Absenteeism:</b> Chronic absence ( missing more than 10% or more of the school year) matters because succeeding in school means being in school</p> <ol style="list-style-type: none"> <li>a. % of kindergarteners with chronic absenteeism</li> <li>b. % of 1<sup>st</sup> graders with chronic absenteeism</li> <li>c. % of 2<sup>nd</sup> graders with chronic absenteeism</li> <li>d. % of preschoolers with chronic absenteeism</li> </ol>	<p>Success in school and later life depends, in part, on attending school. Children who attend regularly are more likely to succeed academically, socially and emotionally, and have a greater chance of becoming economically productive and engaged citizens.</p> <p>One in 10 children in kindergarten and 1<sup>st</sup> grade misses 10 percent of the school year, absences that can correlate with poor academic performance, especially for low-income children unable to make up for time on task. Many of the stress factors associated with poverty—unreliable transportation, unstable housing and maternal risk—can contribute to chronic absence . Beyond the effect on grade-level reading, chronic absence can predict the likelihood that a student will drop out of high school, which in turn can adversely affect future earnings. By 6th grade chronic absence is a clear predictor of drop-out. By 9th grade, missing 20 percent of the school year is a better predictor of dropping out than test scores. Too often, though, schools are not paying attention to these important clues. They are recording school-wide attendance or truancy rates, both of which can mask the number of children missing multiple days of school if all absences are counted, including excused absences.</p> <p>(1) Chang, Hedy N. and Romero, Marijose, <i>Present Engaged and Accounted For: The Critical Importance of Addressing Chronic Absence in the Early Grades</i>, National Center for Children in</p>

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	<p>Poverty, September 2008 Romero, Mariajose and Lee, Young-Sun,                  (2) <i>The Influence of Maternal &amp; Family Risk on Chronic Absenteeism in Early Schooling</i>, National Center for Children in Poverty, January 2008                  (3) Balfanz, Robert, Herzog, Lisa and Maclver, Douglas J., <i>Preventing Student Disengagement and Keeping Students on the Graduation Path in Urban Middle-Grades Schools: Early Identification and Effective Interventions</i>, Educational Psychologist, 42(4), 223–235 Copyright 2007, Lawrence Erlbaum Associates, Inc.</p>
<b>Emerging Indicator:</b>	<b>Significance of the Indicator to School Readiness</b>
<p><b>Early Learning Standards are aligned with K-3 standards.</b></p> <p>% of programs serving young children that have adopted Early Learning Standards.</p>	<p><b>Alignment of learning standards</b> between early childhood and elementary school systems supports continuity in children’s education experiences. However, standards for young children focus on development of foundational skills that are as important as mastery of content matter in early years (Shore, Bodrova &amp; Leong, 2004). In addition to traditional content areas, early learning standards should include attention to social/emotional development, physical development, and approaches to learning (Scott-Little, Kagan &amp; Frelow, 2004).</p> <p>Hawaii’s Preschool Content Standards for 4-year-old programs developed by the School Readiness Task Force in 2003 provide guiding principles and content standards in five domains, that are aligned with DOE General Learner Outcomes and Content and Performance Standards (HCPS II) (GBA, 2003). A more comprehensive set of early learning standards for Hawaii is currently in development.</p>

# Significance of the Early Childhood Indicator to Reading Proficiency by Goal

## Goal 6: Effective Teaching and Learning in K-3 Classrooms

- I. **Outcomes:**
- a. Conditions are in place to produce and maintain excellent teaching and learning
  - b. Trusting relationship within school and between communities and schools.

Indicator	Significance of the Indicator to School Readiness
<p><b>Kindergarten Teachers Credentials:</b> % DOE kindergarten teachers with Early Childhood endorsement.</p>	<p><b>NCATE (National Council for the Accreditation of Teacher Education)</b> recommends additional education on child development for all classroom teachers. Teachers in grades K-3 need skills and knowledge currently presented in early childhood teacher education, including social-emotional growth, family engagement and effective ways to teach early science, early literacy, and the building blocks of mathematics. Research finds that candidates in early childhood preparation programs are more likely than those in elementary teacher preparation to possess attitudes and behaviors that are aligned with and guided by children’s developmental and learning potentials ((NCATE, 2010; Bornfreund 2011; File &amp; Gullo, 2002). NAEYC standards for teacher preparation emphasize: promoting child development and learning; building family and community relationships; observing, documenting and assessing; using developmentally effective approaches to connect with children and families; using content knowledge to build meaningful curriculum, and becoming a professional (NAEYC, 2009).</p>
<p><b>Class Size:</b> % of K classrooms that meet or exceed recommended teacher/student ratios</p>	<p><b>Staff-to-child ratios</b> are one of the most sensitive structural indicators of quality of care, and create the base for classroom interactions and quality instructional support can evolve.. Children who develop relationships with their teachers are more excited about learning, thus more likely to perform better academically and socially. This relationship cannot develop as fully if a teacher has to work with too many students (Adams, 1990; Bellm, et al., 2002; Birch &amp; Ladd, 1997; Graves, 2006; Howes, et al., 1992; National Research Council, 2000; Reynolds, et al., 2006; Pianta &amp; Steinberg, 1992; Vandall &amp; Wolfe, 2000).</p>
<p><b>Reading and Math Proficiency:</b></p> <ul style="list-style-type: none"> <li>a. % of children with reading proficiency in third grade as measured by the State’s proficiency test</li> <li>b. % of children with math proficiency in third grade as measured by the State’s</li> </ul>	<p><b>Millions of American children reach fourth grade without learning to read proficiently.</b> The shortfall is especially pronounced among low-income children: Of the fourth-graders who took the National Assessment of Educational Progress (NAEP) reading test in 2009, 83% of children from low-income families—and 85% of low-income students who attend high-poverty schools—failed to reach the “proficient” level in reading. Reading proficiently by the end of third grade is a crucial marker in a child’s educational development. Failure to read proficiently is linked to higher rates of school dropout, which suppresses individual earning potential as well as the nation’s competitiveness and general productivity.</p> <p style="text-align: right;">-Annie E. Casey Foundation</p>

## Significance of the Early Childhood Indicator to Reading Proficiency by Goal

proficiency test.	
<b>Emerging Indicator:</b>	<b>Significance of the Indicator to School Readiness</b>
<p><b>Skilled K-3 teachers:</b> The % of children who have highly skilled teachers who are dedicated to each child's success as a portion of the overall population.</p>	<p>"...too many teachers lack the training, experience and knowledge to teach reading effectively. According to the Education Trust the percentage of first year teachers at high minority schools is almost twice as high as the percentage at low minority schools". Annie E. Casey, Early Warning, 2010</p> <p>Teachers who provide both instructional and emotional support improve children's academic outcomes. Improving the quality of teachers is crucial to efforts to narrow race- and income based achievement gaps: A child in poverty who has a good teacher for five years in a row makes learning gains large enough, on average, to close completely the achievement gap with higher income students. When skilled teachers have high expectations of their students, children will rise to these expectations with the help of their peers, teachers, and parents (Borman, et al., 2002; Gordon, Kane &amp; Staiger, 2006; Hamre &amp; Pianta, 2005; Loeb, Rouse, &amp; Shoris, 2007; Rice, 2003; Wilson, Floden, &amp; Ferrini-Mundy, 2001).</p>
<p><b>Continuity of Learning Experiences</b> Children's learning experiences in grades K-3 recognize and build on previous skills, following an age-appropriate sequence. Teachers regularly monitor individual child progress to make decisions about next learning goals and best instructional methods.</p>	<p>Pre-kindergarten experiences are important for the development of certain basic skills, but these gains may not be sustained if they are not followed by aligned and integrated experiences in grades K-3. When kindergarten teachers build on the skills learned in pre-K and teach new age-appropriate skills, children's learning builds from one grade to the next (Bogard &amp; Takanishi, 2005).</p>
<p><b>Curriculum Alignment:</b> The percent of children, as a proportion to the overall population in a specified area, who are attending grades kindergarten through third grade in schools whose curricula and expectations are continuous within the schools and aligned with early childhood programs..</p>	<p>Developmentally-sequenced approach to learning that builds on what children are capable of learning at a particular age and stage, and what they have already learned in pre-school, is the most effective method to ensure a continuation of learning. Learning fadeout greatly diminishes when children attend programs and schools that have a coherent education program with aligned standards and curriculum in preschool through third grade (Bogard &amp; Takanishi, 2005; Gormley &amp; Gayer, 2005; Griffin, 2007; Graves, 2002; Kauerz, 2006; Kelin &amp; Knitzer, 2007; Raver &amp; Knitzer, 2002; Raver &amp; Zigler, 1997; Sanders &amp; Rivers, 1996).</p> <p style="text-align: right;">National Reading Panel (2000) <i>Teaching Children to Read</i></p> <p>Higher student performance was attributable to aligning learning goals from grade-to-grade and instruction based on state academic goals, according to one study. Williams, T., Kirst, M., and Haertel, E. (2005).</p>