



Annie E. Casey Foundation

LEARNING TO READ:

**Developing 0-8 Information
Systems to Improve Third Grade
Reading Proficiency**

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About the Resource Guide

Good information is essential to good policy. Yet the information available to administrators, advocates, policy makers, researchers, and the public on young children (0-8) is fragmented, incomplete, and disconnected. As states and communities seek to develop strategies that can ensure healthy child development, readiness for school, and on-grade reading by the end of third grade, they need to draw upon and use the best available information about children 0-8, coherently connect that information, and identify and further develop data systems to provide missing information needed to enact good policy.

This *Resource Guide* provides an overview of the resources and best practices available to states and communities to gather and use information about children 0-8 in fashioning early childhood strategies which ultimately can achieve the goal that children are proficient in reading by the end of third grade. It is produced as a companion to the Annie E. Casey Foundation's Kids Count Special Report, *Learning to Read: Early Warning! Why Reading by the End of Third Grade Matters*, focusing upon the information and data systems states and communities need to develop and use to achieve that goal.

Fortunately, states and communities do not have to start from scratch. The primary purpose of the *Resource Guide* is to provide leaders in the early childhood (0-8) field with an introduction to current resources and best practices across the country in developing such information systems. The *Resource Guide* itself provides an overall narrative that describes the importance of third grade reading and the need for a 0-8 approach to achieving it and then outlines major resources and best practices in developing the information systems needed to achieve that end. While not exhaustive of all resources available, the *Resource Guide* draws upon the author's cross-cutting work and experiences that has included involvement in many of the initiatives cited and recognized that there is synergy in combining the collective wisdom from this work.

The first Appendix provides a shorter summary of specific documents and resources that can be accessed on the internet that get into the details on 0-8 data collection, analysis, and use – with direct weblinks to those resources. Since developing information systems is both product and process, the second Appendix offers a checklist for leaders to consider as they work to develop and integrate 0-8 information systems.

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Developing 0-8 Information Systems to Improve Third Grade Reading Proficiency

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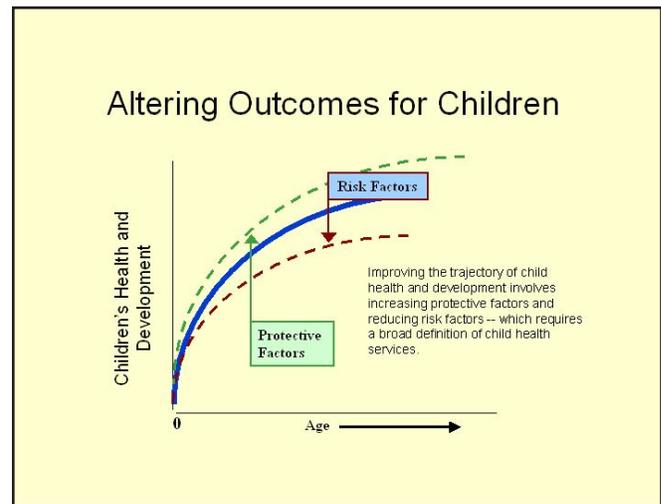
LEARNING TO READ: Developing Information Systems at the State and Community Level to Improve Third Grade Reading Proficiency

The Importance of Third Grade Reading Proficiency: What We Know

Reading by the end of third grade is a key milestone in a child's educational development and a sentinel indicator of future educational success. Young children grow and develop along different paths and are not reliable test takers in the earliest years, but, absent special conditions, all children should be reading at a proficient level by the end of third grade. While different states use different tests to measure students' reading, all now have measures of reading proficiency for public school students in fourth grade, as required by the federal No Child Left Behind Act.

Unfortunately, far too many American children fall short on reading proficiency by the end of third grade, which jeopardizes their future growth and development and society's vitality. Children from low-income families and minority groups and children living in distressed neighborhoods generally fare worst on reading proficiency. *Learning to Read*, the Annie E. Casey Foundation's Special 2010 Kids Count report, makes the case for a comprehensive approach to achieving reading proficiency that addresses gaps that begin at birth and often widen, rather than narrow, as children grow and develop.¹

National research is clear that it is critical to address the trajectory of healthy growth and development of children from birth through eight. Up to half of subsequent school difficulties and failure is already apparent by the time children start school.² Gaps in cognitive development are apparent as early as nine months of age,³ and disparities in health status are evident at the time of birth.⁴ The first two years of life are crucial



for attachment and social and emotional well-being, with toxic stress and exposure to hazardous environments most damaging to children in these first years of life.⁵ Children grow and develop rapidly in the early years, and setting a healthy trajectory for growth creates the scaffolding for future development. This has been depicted in the health community as a "life course" approach to healthy development,⁶ with an emphasis upon strengthening protective and reducing risk factors.⁷

While schools should be accountable to narrowing any readiness gap children experience at school entry,⁸ the best way to fully close the gap includes addressing conditions in the early years that impact children's healthy growth and development. Clearly, schools have the responsibility for providing high quality education, and too many schools and educational systems fall short in providing this for all children.⁹ Both early childhood and early elementary strategies are needed to ensure children are reading proficiently by the end of third grade.

Research also is clear that school readiness and early elementary success require family and community support as well as formal health, educational, and social services.¹⁰ Parents are children’s first and most important teachers, and parents as well as children need safe and supportive neighborhoods to provide that nurturing and support.¹¹ Young children need health services, quality early care and education services, good nutrition and regular exercise, and attention to transitions from early childhood into formal schooling. Many exemplary programs for children and families in the earliest years of life have shown their efficacy in strengthening families, supporting neighborhoods, providing preventive and developmental services, offering quality early care and education and preschool services – and contributing to greater school readiness as a result.¹² Many exemplary early elementary educational systems have shown their efficacy in raising student achievement and third grade reading proficiency while narrowing gaps by race, ethnicity, and income.¹³ There also is evidence that focusing attention at a neighborhood as well as an individual child level can contribute to making changes that improve children’s school readiness and early elementary success.¹⁴

In short, ***third grade reading proficiency is the product of multiple factors affecting child health and development from birth (and prenatally) through age eight.***

If states, communities, and schools are to meet the challenge that “all children are proficient in reading by the end of third grade,” they will need information about the status of children to guide their work. This includes information about children that extends from birth through eight and covers health, social, economic, neighborhood, and educational information. In order to “close the gap in results” that poor, minority, and children with special vulnerabilities face, this also includes information specific to those different subgroups of children.

Developing Information Systems to Address Third Grade Reading Proficiency: Resources and Promising Practices

In response to the federal No Child Left Behind Act, all states now collect and provide information on the reading proficiency of students in public schools in fourth grade. While states scale student scores differently,¹⁵ states have basic, and reliable, student reading performance measures that can be used to determine how well children read at the end of third grade. At the same time, states and communities need much more information on children’s health and well-being across the time from birth to eight in order to develop comprehensive approaches that can improve reading proficiency.

Information about young children and their development is needed to:

- Identify needs and opportunities throughout the early years;
- Focus attention and inform policy development to address gaps and needs;
- Track enacted policies for achieving their objectives; and
- Assess progress for policies collectively achieving the goal of third grade reading proficiency.

Fortunately, states and communities do not have to start from scratch in developing early childhood information systems. There are a number of resources and emerging best practices to draw upon in developing the information systems they need. While many of these have occurred independently, they share many common goals and collectively can contribute to state and community information systems building efforts. They defy neat categorization – some focus specifically on indicators and their development, while others focus upon data analysis strategies. Some are comprehensive and cross-cutting in approach, while others focus upon specific key aspects of young children’s development or developmental periods. Each has its own insights and relevance, however, that deserves to be reviewed and

considered in developing 0-8 information systems to improve children’s healthy development and reading proficiency by the end of third grade.

Comprehensive Efforts to Develop School Readiness and Early School Success Data

State Indicators of Readiness: The School Readiness Indicators Initiative. From 2001 to 2004, the School Readiness Indicators Initiative (SRII) supported teams from seventeen states in developing child indicators important to achieving the goal that “all children start school ready to learn.”¹⁶ Indicators were sought that met specific tests regarding their reliability, measurability, malleability, and communicability. SRII’s objectives were:

1. To create a set of measurable indicators related to and defining school readiness that can be tracked regularly over time at the state and community levels;
2. To have states and local governments

adopt this indicator-based definition of school readiness, fill in the gaps in data availability, track data over time and report findings to their citizens; and

3. To stimulate policy, program and other actions to improve the ability of all children to read at grade level by the end of third grade.¹⁷

SRII was able to develop a core set of indicators that most of its states could collect and use, as well as an emerging set of indicators that some states were able to collect or states found would further contribute to measuring important aspects of school readiness.

Figure Two shows the core set of indicators established through this process leading up to “children ready for school,” which remain a good starting point for states to use in developing indicators for tracking the status of state actions to ensure children start school ready to learn and equipped for educational success.

Figure Two: School Readiness Indicators Initiative Core Indicator List

Ready Families

- * Mother’s education level
- * Child abuse and neglect

Ready Services – Early Care and Education

- * Children enrolled in an early education program
- * Accredited child care centers
- * Access to child care subsidies

Ready Services – Health

- * Health insurance
- * Access to prenatal care

Ready Schools

- * Class size (K-1)

Ready Communities

- * Young children in poverty
- * Supports for families with infants and toddlers (e.g. Early Head Start)

Ready Children

- * Physical well-being and motor development
- * Approaches to learning
- * Cognition and general knowledge

- * Birth to teens
- * Children in foster care

- * Early education teacher credentials
- * Accredited family child homes

- * Low birth weight
- * Immunizations

- * Fourth grade reading scores

- * Lead poisoning

- * Social and emotional development
- * Language development

While the process revealed the relative paucity of information about children from the time of birth (in vital records) until school entry, states were able to develop some indicators for the birth to five years that provided a strong basis for examining trends over time. Moreover, as states developed specific strategies during this period to reach and serve young children and their families, the collection of information through those programs and strategies was informed by the SRII work and helped to bolster the information base.

Community Indicators of Readiness: The National Neighborhood Indicators Partnership and other Community Initiatives.

America is composed of neighborhoods, and different neighborhoods have very different characteristics, as *Village Building and School Readiness* showed.¹⁸ Particularly when children are young, their world is often geographically bounded and their development is heavily influenced by what is immediately around them. While SRII worked to develop information that could be collected on a statewide basis, most state-level data are at best available for analysis down to a county or city level, and not to a neighborhood (or elementary school) level. Different information about young children and their families often is available within communities that can be broken down by neighborhood. The National Neighborhood Indicators Partnership is a collaborative partnership led by the Urban Institute that includes over thirty local partners committed to making public data sets and information available to residents and community members. NNIP worked with the State Early Childhood Policy Technical Assistance Network (SECPTAN) to produce a toolkit for use in gathering early childhood information at the neighborhood level.¹⁹ Eight NNIP local partners then used the toolkit to complete projects that collected and analyzed information about their communities related to early childhood and school readiness, showing the value of developing very neighborhood-level early childhood information sets to inform and influence policy.²⁰

Through funding from the Kellogg Foundation,

United Way Worldwide and the UCLA Center for Healthier Children, Families, and Communities have been working with a consortium of communities in employing the early development index (EDI – a kindergarten assessment that measures children’s development across the five school readiness domains) at a community and neighborhood level to identify areas for attention, coupling that assessment with other community-level data. EDI has been used extensively in Canada and now Australia and New Zealand as a school readiness planning tool that addresses social and neighborhood determinants of healthy development.²¹

Early Elementary Information Leading to Third Grade Reading: the Data Quality Campaign, the Early Childhood Data Collaborative, and the Education Trust.

Founded in 2005, the Data Quality Campaign (DQC) is a national, collaborative effort of over fifty organizations to support state policy makers in improving the availability and use of high quality education data to improve student achievement. Its overall focus is upon helping states develop P-20 statewide longitudinal data systems (see Institute for Educational Sciences section, below) through providing technical assistance and peer-to-peer learning opportunities. The DQC has developed a set of “Ten Essential Elements” in developing such longitudinal data systems, with an emphasis upon how such systems can be used by policymakers, data managers, district administrators, teachers and principals, and postsecondary leaders. DQC recently developed a similar “Ten Essential Elements” for the “P” component of a P-20 system and examined the particular needs to align early childhood and early elementary data systems. DQC maintains a resource library of developments in the field of longitudinal data development.

The Early Childhood Data Collaborative (ECDC) is a consortium of national organizations created to support state policy makers’ development, access and use of coordinated early care and education data. Convened in 2009, the ECDC’s focus is on the promotion of “data-driven decision

making” to support school readiness, promote high quality early care and education programs/workforce and eliminate disparities based on child outcomes. Effective linkages to K-12 data is also a key component of the Collaborative’s work. The ECDC promotes ten fundamentals of a coordinated early care and education data system to guide and support these state efforts.

The Education Trust’s (ET) mission is to promote high academic achievement for all students while closing the gaps in opportunity and achievement by race, income, language, and ethnicity. ET focuses upon data on student achievement, including early elementary reading proficiency, as a key lever for mobilizing for change. ET has emphasized the importance of schools to closing achievement gaps and examined schools with demonstrated success in maintaining high levels of achievement with student populations that are diverse and low-income.²²

The DQC, ECDC, and ET emphasize the importance of developing data systems that incorporate key measures of the early elementary teaching force and classroom characteristics, including credentials and experience, class size, curricula, and tools and resources, as important factors in educational success.

Best Practices and Resources in Addressing Critical Information Needs

Kindergarten Readiness Assessments: National Education Goal Expert Panel and State and Foundation Efforts. Obviously, the key to a comprehensive information system on young children is knowing what children “know and can do” at the time of kindergarten entry. This represents an essential outcome for efforts in the early years to ensure children start school healthy and equipped for education success. It represents a key factor in determining what challenges schools face and must address in raising achievement and ensuring all children are proficient in reading at the end of third grade.

The First National Education Goal Expert Panel

identified five key domains that reflect the overall concept of school readiness, or “what children know and can do” at the time of kindergarten entry.²³ These five domains (physical well-being and motor development, social and emotional development, approaches to learning, language development, and cognition and general knowledge) are based upon an extensive body of research that includes the seminal research synthesis in *From Neurons to Neighborhoods*.²⁴

While separate domains, they interact in affecting future growth and learning and are correlated with one another. Children who are behind their peer group in more than one domain face many more obstacles to catching up than those who are behind in only one domain.²⁵ The SRII recognized the centrality of these domains as a measure of school readiness and included them in their definition of core measures for “children ready for kindergarten,” even though most states did not have reliable kindergarten assessments that measure children’s status across all (and often any) of the five domains.

Although “high stakes testing” has been rejected for younger children and the No Child Left Behind Act does not require states to provide any testing or assessment information prior to fourth grade, many states and local school districts now are establishing kindergarten assessments for use in school.²⁶ Generally, these have taken one of two approaches (although the two could be combined): (1) an authentic (e.g. teacher observational) assessment of children across the five domains, and/or (2) a discrete, point-in-time test related to language and literacy (and sometimes numeracy) development.²⁷

The former has included modifications of work sampling instruments employed at an individual child level (Maryland is a leading state in this area²⁸) or at an overall classroom level (Hawaii²⁹). While there is variation in the actual assessment categories (generally from 20 to 60, although the EDI is even larger), there is a great deal of commonality across the different instruments and their focus that have been developed by states,

individual school districts, and organizations that develop school-related testing and assessment tools. The biggest challenge authentic assessments face is their cross-rater reliability, as without extensive training different teachers are likely to scale students differently.

The latter include very cursory tests related to language development (the Dynamic Indicators of Basic Early Learning, DIBELS, has two items, letter recognition and sound recognition) to much more comprehensive language and literacy tools (with multiple items that may measure receptive vocabulary, story comprehension, and phonemic awareness).

States which have employed authentic assessments generally see the approach as being most consistent with the research base and their state Early Learning Standards. States which have employed a language/cognitive test generally see the approach as being simple and less subject to inter-rater reliability concerns. The State Early Childhood Technical Assistance Resource Network (SECPTAN, a partner to SRII) provided a review of different tools used by states and their strengths and limitations that is still relevant. It indicates that there is an opportunity to incorporate both authentic assessments and point-in-time tests to ensure that all domains of school readiness are assessed and provide ways to improve cross-rater reliability within the authentic assessment.³⁰

Resiliency, Risk and Protective Factors, and Social Determinants of Health: American Community Survey and other Survey Data Sources.

The resiliency and the risk and protective factor literature emphasize that social ties and connections, nurturing environments, and opportunities for children to safely explore their world and learn are fundamental to early learning.³¹ The health literature points to a number of similar social determinants to a child's healthy development – including family economic security, consistency in care and nurturing, and level of social connections and opportunities.³²

These factors, however, generally are not the focus

Specific Core Federal Steps in Early Childhood Information Systems Development

While the focus of this resource brief is on states and communities, the federal government also can play a leadership role in a number of ways. The following are drawn from a longer description of core actions the federal government can take to support information systems development in early childhood.

1. Develop a non-proprietary core authentic kindergarten assessment tool for state and community use
2. Support the development of expanded patient-directed information collection at the birth of a child and through patient records that includes social determinants of healthy development
3. Expand the Child Health Survey for annual reporting and ability for community as well as state data analysis
4. Encourage or direct states to incorporate chronic absenteeism measures within statewide longitudinal data systems
5. Inventory and disseminate “best practices” among states in incorporating early childhood data within statewide longitudinal data systems

Source: Developing Core National Guidelines for Measuring and Tracking the Healthy Development of Young Children: Six Opportunities

of any individual services the child receives or programs in which the child participates and can, at best, be partially captured within administrative databases. They still relate to underlying conditions within the family and community that support healthy child development which are subject to both individual and community-level public actions and policy.³³ Collection of information about these determinants is important, both as performance measures for evaluating different services and initiatives and as population-based measures for deploying resources and

Figure Three

**The Implications of Place:
Census Tracts by Child-Raising Vulnerability Factors and Total Population**

	All Census Tracts	No Vulnerability Factors	1-2 Vulnerability Factors	3-5 Vulnerability Factors	6-10 Vulnerability Factors
Tracts	65,321	35,753	16,185	8,126	5,257
Total Population	281,421,906	164,392,149	66,462,714	31,707,210	18,859,833
Percent of Population		58.41	23.62	11.27	6.70
<u>Vulnerability Indicators</u>					
Percent Single Parent	27.13	20.46	30.62	41.52	53.10
Percent Poor Families with Children	13.57	7.18	15.00	26.54	41.43
Percent 25+ no HS	19.60	13.53	21.02	36.00	48.00
Percent 25+ BA or Higher	24.00	28.67	23.01	13.00	7.14
Percent 16-19 not School/Work	6.00	3.05	1.03	10.41	15.00
Percent HoH on Public Assistance	7.81	4.87	7.75	14.57	25.48
Percent HoH with Wage Income	77.72	80.60	74.08	75.12	69.10
Percent HoH - Int/Div/Rent/Home	35.87	42.31	33.73	18.86	11.05
Percent 18+ Limited English	4.62	1.87	4.82	11.67	17.52
Percent Owner-occupied Housing	60.24	71.00	51.10	42.57	29.62

Source: Geolytics Census 2000 Data from Urban Institute, Washington DC. Additional data in: *Village Building and School Readiness*.

tracking overall progress to achieving goals of school readiness and reading by the end of third grade.

Some of these social determinants relate to underlying demographics about families – their composition, educational level, and income. The American Community Survey (ACS) includes a number of indicators that, collectively, can provide a general profile at the state, community, and census tract level. *Village Building and School Readiness* offers a list of ten indicators that can be drawn from the ACS to assess neighborhoods and communities for their “child-raising vulnerability” that can help focus attention geographically.³⁴ As data becomes available from the American Community Survey at a census tract level, it will be possible to make use of such measures to get some information on these social determinants and risk and protective factors.

As Figure Three shows (see discussion of community indicators and NNIP), there are profound variations in the presence of these

conditions by geographic location – indicating the need for place-based strategies that require community-building as well as individual service strategies to succeed. Moreover, while 83% of residents in census tracts with no vulnerability factors are white and non-Hispanic, 83% of residents in census tracts with six or more vulnerability factors are of color.

In addition to the American Community Survey data, there is other survey data that includes measures related to family and child social ties and connections and community cohesion and support for young children. The national Child Health Survey provides state-level information on children’s health that contains a number of indicators for these social determinants.³⁵ A few states do similar surveys that can be further broken down by geographic region. As states and communities move forward and consider collecting further information about young children and their families, valid and reliable survey instruments for measuring such social determinants exist and are available.³⁶

Early Elementary Absenteeism and School

Data: Attendance Counts. Once children enter public schools, there is a wealth of information that is gathered and maintained about them, particularly as they move beyond the early elementary years. This includes, but is much more extensive, than the information required to be reported under the No Child Left Behind Act. It includes a variety of performance and participation data, from different test scores and report cards and grade retention information to special education and English as a second language status and disciplinary actions and attendance. While most schools report on truancy, suspensions, and expulsions in the later grades and average daily attendance in the early grades, there is increasing attention to individual student attendance rates in the early elementary years. Attendance Counts (AC), a national initiative supported by the Annie E. Casey Foundation, has focused attention on chronic elementary absenteeism (missing more than ten percent of school days in the school year) as an early warning sign for subsequent school difficulties, including reading proficiency by the end of third grade.³⁷ Generally high (above 95%) average daily attendance rates can mask the presence of substantial numbers of students who have chronic elementary absenteeism. Incorporating a measure of chronic school absenteeism into early childhood information systems (including preschool, where possible) can provide an additional measure of child risk and focus attention on strategies that can improve that attendance and children's overall learning and

development.³⁸

Reading Proficiency: National Assessment of Educational Progress Scores, Other Reading Proficiency Measures and the Common Core Standards Initiative. While states vary widely on what their fourth grade reading scores deem as proficient in reading, the National Assessment of Educational Progress (NAEP) provides state comparisons in fourth grade reading proficiency, on an overall child population level and by different racial subgroups (in most states at least White, non-Hispanic; Hispanic; African American; and Asian and Pacific Islander). At a minimum, these comparisons can be used to better interpret the actual level of reading proficiency that exists at a state level. The NAEP scores show that only one-third of fourth graders are truly "proficient" in reading, based upon what will be expected of them to truly master subsequent course material and curriculum.³⁹ International comparisons show that American students score higher than some countries, and lower than others, on their reading proficiency at fourth grade, and generally in the middle among countries considered to be developed.⁴⁰

Ideally, states should be encouraged to recalibrate their own fourth grade proficiency assessments to much better align with those from NAEP or there should be metrics established for advocates and education experts within states to do those recalibrations themselves. Currently, states draw the bar of what constitutes "proficiency," with

Quick Links to Websites

School Readiness Indicators Initiative (www.gettingready.org)
National Neighborhood Indicators Partnership (www.urban.org/nnip)
Data Quality Campaign (www.dataqualitycampaign.org)
Early Childhood Data Collaborative (www.ecedata.org)
Education Trust (www.edtrust.org)
State Early Childhood Policy Technical Assistance Network (www.finebynine.org)
Attendance Counts (www.attendancecounts.org)
Institute for Education Sciences (www.ies.ed.gov)
National Assessment of Educational Progress (www.nces.ed.gov/nationsreportcard/)
Build Initiative (www.buildinitiative.org)

many states reporting that upwards of eighty percent of their fourth graders are proficient in reading.⁴¹

While the measure of reading proficiency at the end of third grade (and/or fourth grade reading scores) can be done with great reliability and validity for any use on a classroom, school, and student subgroup level (and usually an individual student level), states and communities need ways to scale the scores to provide comparisons not only within the state, but across the states.

The National Governors Association Center for Business Practices has teamed with the Council of Chief State School Officers to develop the Common Core State Standards Initiative to provide consistent descriptions of what children are expected to learn at each grade level in both English Language Arts and Mathematics. The English Language Arts standards include reading standards related to foundation skills, literature, and informational text as well as standards for writing, language, speaking and listening.⁴² Adopted by thirty-five states and the District of Columbia, the standards are an effort to align educational expectations across the country, although they themselves do not measure proficiency. The Common Core State Standards Initiative has been supported by the Bill and Melinda Gates Foundation, which also is supporting the development of tests to go with the standards.

Integrated Approaches Spanning 0-8 and Addressing Disparities

Statewide longitudinal data systems: Institute for Education Sciences. Under No Child Left Behind, states are required to develop longitudinal data systems for all children in public education. Federally, the Institute for Educational Sciences is providing substantial financial support and technical assistance to states to develop statewide longitudinal data systems that provide comprehensive information on students over time and can track students through a universal student identifier as they move from school to school and

even across school districts in the state. In 2007, federal funding for developing these data systems extended, at state option, to incorporating early childhood data and post-secondary education and job training data, in an effort to move from “cradle to career” in tracking student performance.⁴³ Pennsylvania was one of the first states to apply for and secure funding to expand its statewide longitudinal data system to incorporate significant early childhood education data.⁴⁴ While many states are still at the level of creating a common state system for data collection from the many distinct systems that exist within different school districts, states increasingly are focusing attention on broadening the statewide longitudinal data system to include early childhood data. In addition, there are specific opportunities to include chronic elementary absence measures within the data systems.

In 2009, federal ARRA funding provided \$250 million in additional support for statewide longitudinal data system development, with specific emphasis upon expanding the data base beyond the K-12 educational system. Twenty states received funding from this ARRA pool of funds, with a number developing plans to incorporate early childhood measures into their data systems.⁴⁵

The experiences of these states will be important in supporting the development of further connections and links. In particular, these statewide longitudinal data systems can help early childhood systems development in two very important ways:

1. As participation in early childhood programs, such as preschool, is included in the data systems, it will be possible to compare student program participation with student performance, including any measures of kindergarten readiness through third grade reading proficiency. While such analyses alone cannot attribute causality, they can give strong indications of activities that contribute to achieving reading proficiency.

2. Since the statewide longitudinal data system contains information about all children in public schools and their racial, language, free-and-reduced meal, and special education characteristics, it can help identify gaps in participation rates for programs and services the state and its communities are providing for young children and their families. It can identify particular subpopulations and geographic areas where additional focus is most needed.

Mining the experiences of states in their incorporation of early childhood data into statewide longitudinal data systems will be important to identifying best practices and further developing these systems.

Addressing Issues of Equity and Disparity in Children’s Healthy Development: The Build Initiative. There are a growing number of organizations that are focusing specifically upon closing opportunity and achievement gaps by language, race, income, and ethnicity. In early childhood, this includes the Center for Law and Social Policy and the National Association for the Education of Young Children, as well as the National Center for Black Child Development and La Raza, among many others. At the K-12 level, the Education Trusts has been on of the leaders in this movement.

The Build Initiative’s Equity and Diversity Work Group, which includes representatives from most of these groups and organizations, has outlined the importance of building early learning systems that address five critical gaps faced by children of color in early childhood: (1) the readiness gap; (2) the participation gap; (3) the cultural competence gap; (4) the workforce diversity gap; and (5) the shared planning and decision-making gap.⁴⁶ This framework has been employed in examining existing statewide data systems and making recommendations on how states can help insure that issues of gender, race, language, and social class are incorporated into data collection, analyses, and use.⁴⁷

State and Community Actions: Next Steps and Recommendations

Collecting, reporting on, and using early childhood information to inform public policy and improve third grade reading proficiency represents both product and process. Many of the “products,” in terms of exemplary data collection, analysis, and use efforts have been suggested in the preceding discussion of promising practices.

As important as the products is a process that ensures broad-based involvement in their development, collection, and use. The National Neighborhood Indicators Project has a primary goal of “democratizing information.” Ultimately, information needs to be used to benefit young children and their families. Many of the solutions to closing the gap in third grade reading proficiency ultimately require strong family and community engagement and commitment to success. The financing of Parent Information Resource Centers (PIRCs) at the federal level was designed to ensure parents are given the knowledge they need to help their children learn, and this should extend to ensuring that diverse leaders are involved both in developing information systems and using them. This includes transparency and public and research access to data systems in ways that also protect the rights of individual children and their families.

The state Early Care Advisory Councils, funded at the federal level, are charged with conducting a needs assessment focusing on early childhood programs and services, along with the development of a unified data collection system. These activities can and should extend to the information systems necessary to help states, communities, advocates, and parents and families make use of them. Establishing an inclusive process for developing an early childhood information system is needed to ensure the ownership and commitment of all those who can contribute to achieving its goals.

Appendix One: Web Links for Specific 0-8 Early Childhood Data Publications and Reports

States and communities do not need to start from nothing in developing information systems for children from birth through third grade on children's services, conditions, and outcomes.

Existing Publications to Support States and Communities in 0-8 Early Childhood Data Systems Development.

The School Readiness Indicators Initiative (SRII) has compiled a core set of existing and emerging early childhood measures in *Getting Ready: Findings from the National School Readiness Indicators Initiative*. The SRII website provides further information and compiled reports from each of the seventeen states participating in the Initiative (www.gettingready.org).

The State Early Childhood Policy Technical Assistance Network (SECPTAN) collaborated with the National Neighborhood Indicators Partnership (NNIP) to provide a *School Readiness Resource Guide and Toolkit* for data collection about young children and their families that could be gathered at a neighborhood level to inform policy development. In Chapter One of *Village Building and School Readiness*, SECPTAN provided a census-tract level analysis of census data that could be used to identify tracts with high levels of child raising vulnerability. NNIP produced a report on its eight-community initiative describing on-the-ground experiences in developing neighborhood analyses, *Using Data to Promote Collaboration in Local School Readiness Systems*.

The Build Initiative's Equity and Diversity Working Group produced a specific document outlining the challenges and opportunities available to states in developing culturally competent early childhood data systems, *Building Public Early Childhood Data Systems for a Multi-Ethnic Society*. The Build Initiative also produced a document describing the opportunities available to states to incorporate early childhood data into federally-supported statewide student longitudinal data bases, *Opportunities to Incorporate Young Child Data into Statewide Longitudinal Data Systems*. The Data Quality Campaign developed a set of essential elements for developing educational data systems, as well as a number of reports on data system development, with an emphasis upon **K-12 data** but development of similar elements for **early childhood**. DQC maintains a resource library and produces its own reports, including *Linking Data Across Agencies: States That Are Making It Work*.

Federal Resources and Guidance for State 0-8 Data System Development

Under federal Early Childhood Advisory Council (ECAC) funding, states are directed to conduct assessments of their early childhood service systems, including identifying high risk communities in their states. Many of the resources cited above can be useful to states in responding to the **ECAC federal guidance** regarding these assessments. Under initial funding for home visiting programs, states are directed to conduct similar needs assessments around home visiting programs, **home visiting federal guidance**. The direction to states on developing statewide longitudinal data bases has broadened to support states in incorporating early childhood data, with the Institute for Educational Sciences provided information about these **statewide longitudinal data bases**. The Child Health Insurance Program Reauthorization Act (CHIPRA) established a child health quality outcomes initiative that expanded the federal role in establishing child health measures, with an **initial set of child health quality measures**

developed for voluntary use.

Databases Providing State-Level Information on Children 0-8

The **Kids Count Data Center** contains a wealth of child data available at the state level, with some of that data about young children and their families. **Child Trends**, **The Pathways Mapping Initiative**, and the **National Center for Children in Poverty** similarly maintain databases that provide data, including administrative data on service use, as well as guidance on their meaning and use. **The National Center for Education Statistics** provides comparative state information on National Assessment of Education (NAEP) scores, including **fourth grade reading proficiency**. The **National Child Health Survey** provides comparative state information from parental reporting on a number of young child issues, including health-related measures and measures that relate to social determinants of health. **Healthy People 2020** includes a number of child as well as adult health measures of well-being for the nation as a whole, as well as for states and subpopulations.

Voices for America's Children drew upon a variety of national data sources on public expenditures to develop state-level as well as national estimates of overall public investments in learning and development by child age, in **Early Learning Left Out**. That publication includes data from the National Institute of Early Education Research's fifty-state report on preschool spending, **2009 Preschool Data Book**. Voices for America's Children also produced a report comparing state reading proficiency scores with National Assessment of Educational Progress scores, **Are All America's Children Really Above Average?**

Appendix Two:
**Checklist – Common Sense Steps to Identifying, Using, and Developing Data
to Improve Third Grade Reading Proficiency**

HAVE YOU:

- Outlined the conditions known to contribute to third grade reading proficiency, including:
 - Cognitive and noncognitive skills
 - Individual characteristics and social determinants
 - Family and community factors
 - Participation in and quality of community and school programs and services.

- Identified different ways to analyze data, e.g., by:
 - Race and ethnicity
 - Economic characteristics and social determinants
 - Geography/neighborhoods
 - Special needs and conditions
 - Participation in health, early childhood, and other programs

- Inventoried data that exist and the data's strengths and limitations, including:
 - Demographic data from census and other sources
 - Administrative data and matches
 - Survey and parent reporting data
 - Geomapping capacities

- Developed strategies to analyze existing data and identify priorities for additional data development
 - Routine reports from state agencies on administrative data
 - Expert advisory groups to guide further data development
 - Protocols with research organizations to support additional analysis and use

- Paid particular attention to the role of statewide longitudinal data bases, for use as:
 - Baseline and comparative data
 - Cohort analysis and longitudinal outcomes.

Endnotes

- ¹Fiester, L, with Smith, R (2010). *Learning to read: Early warning! Why reading by the end of third grade matters*. Kids Count Special Report. Annie E. Casey Foundation: Baltimore, MD.
- ²Rouse, C, Brooks-Gunn, J. & McClanahan, S (2004). "Introducing the issue: School readiness: Closing racial and ethnic gaps," *The future of children* 15:1 pp. 5-14.
- ³Halle, T, Forry, N, Hair, E, Perper, K, Wandner, L, Wessel, J & Vick J (2009). *Disparities in early learning and development: Lessons from the early childhood longitudinal study – birth cohort (ECSL-B)*. Council of Chief State School Officers and Child Trends: Washington, DC.
- ⁴U.S. Department of Health and Human Services. (2010) *Healthy people 2010: Understanding and improving health*. 2nd ed. Washington, DC: U.S. Government Printing Office.
- ⁵National Scientific Council on the Developing Child (2005). *Excessive stress disrupts the architecture of the developing brain: Working paper #3*. Center on the Developing Child: Cambridge, MA. <http://www.developingchild.net>
- ⁶Brofenbrenner, U (1986). Ecology of the family is the context for human development: Research perspectives. *Developmental Psychology* 22:6, pp. 723-744. National Research Council and Institute of Medicine (2004). *Children's health, The nation's wealth: Assessing and improving child health*. Committee on Evaluation of Children's Health: The National Academies Press: Washington, DC
- ⁷Bruner, C (2010). *Healthy Child Storybook*. Voices for America's Children: Washington, DC. Figure: p. 4. References: pp. 27-29.
- ⁸Rothstein, R (2005). *Class and schools*. Economic Policy Institute: Washington, DC.
- ⁹Kozol, J. (2005). *The shame of the nation: The restoration of apartheid schooling in America* (1st ed.). New York: Crown Publishers.
- ¹⁰Horton, C (2003). *Protective factors literature review: Early care and education programs and the prevention of child abuse and neglect*. Center for the Study of Social Policy: Washington, DC. Bruner, C (2009). Supporting public investments in children: Beyond 'either-or' thinking. In: *Philanthropy, advocacy, vulnerable children, and federal policy: Three essays on a new era of opportunity*. National Center for Service Integration: Des Moines IA. Pp. 57-65.
- ¹¹Brooks-Gunn, J & Markman, L (2005). The contribution of parenting to ethnic and racial gaps in school readiness. *The future of children* 15:1 pp. 139-168. Duncan, G & Magnuson, K (2005). Can family socioeconomic resources account for racial and ethnic test score gaps? *The future of children* 15:1. pp. 35-54.
- ¹²Bruner C (2007). *Village building and school readiness: Closing opportunity gaps in a diverse society*. State Early Childhood Policy Technical Assistance Network: Des Moines, IA. Chapter 3.
- ¹³Rothstein, *op.cit.*
- ¹⁴Bruner, C & Schor, E (2009). *Clinical health care practice and community building: Addressing racial disparities in healthy child development*. National Center for Service Integration: Des Moines, IA.
- ¹⁵Tyrell, T & Spangler, S (2010). *Are all America's children really above average? A comparison of state and national reading assessments*. Voices for America's Children: Washington, DC.
- ¹⁶Rhode Island KIDS COUNT (2005). *Getting ready: Findings from the national school readiness indicators initiative – A 17 state partnership*. Providence: RI. School readiness equation, p. 12-13.
- ¹⁷*Ibid.*, p. 10.
- ¹⁸*Village building and school readiness, op.cit.*, Chapter 1.
- ¹⁹Bruner, C (2007). *School readiness resource guide and toolkit: Using neighborhood data to spur action*. State Early Childhood Technical Assistance Resource Center and National Neighborhood Indicators Partnership: Des Moines, IA.
- ²⁰Kingsley, G, & Hendey, L (2010). *Using data to promote collaboration in local school readiness systems*. The Urban Institute: Washington, DC.
- ²¹Human Early Learning Partnership (2010). *The early development instrument (EDI) in British Columbia: Documenting impact and action in schools, communities and early childhood development*. University of British Columbia: Canada.
- ²²Haycock, K. (2010). *Improving achievement and closing gaps between groups: Lessons from schools and districts on the performance frontier*. Powerpoint. The Education Trusts: Washington, DC.
- ²³National Research Council: Institute of Medicine. Early Childhood Assessments Resource Group (1998). *Principles and recommendations for early childhood assessments*. National Education Goals Panel.
- ²⁴Shonkoff, J & Phillips, D (eds) (2000). *From neurons to neighborhoods: The science of early childhood development*. National Research Council: Institute of Medicine.
- ²⁵Werthheimer, R, Croan, T, Moore, K, & Hair, E (2003). *Attending kindergarten and already behind: A statistical portrait of vulnerable young children*. Child Trends Research Brief: Washington, DC.
- ²⁶Stedron, J (2009). *NCSL technical report: State approaches to school readiness assessment*. National Conference of State Legislatures: Denver, CO.

- ²⁷Bruner, C (2003). *Measuring children's school readiness: Options for developing state baselines and benchmarks*. State Early Childhood Policy Technical Assistance Network: Des Moines, IA.
- ²⁸Maryland State Department of Education (2009). *Children entering school ready to learn: 2009-2010 Maryland model for school readiness*. Annapolis, MD.
- ²⁹Systems Evaluation and Reporting Section (2009). *Hawaii state school readiness assessment: State results*. School Year 2009-2010. Department of Education. Retrieved at: <http://arch.k12.hi.us/PDFs/hssra/2010/State-999-State.pdf>.
- ³⁰*Measuring children's school readiness, op.cit.*; Bruner, C (2010). *Developing core national guidelines for measuring and tracking the healthy development of young children: Six opportunities*. Child and Family Policy Center: Des Moines, IA.
- ³¹Henderson, N, Benard, B, Sharp-Light, N (1999). *Resiliency in action: Practical ideas for overcoming risks and building strengths in youth, families, and communities*. Jossey-Bass: San Francisco, CA.
- ³²National Research Council and Institute of Medicine (2004). *Children's health, the nation's wealth: Assessing and improving child health*. National Academies Press: Washington, DC.
- ³³Bruner, C. & Schor, E. (2008). *Clinical practice and community building: Addressing racial disparities in healthy child development*. National Center for Service Integration: Des Moines, IA.
- ³⁴*Village building, op.cit.* Chapter One.
- ³⁵U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau (2009). *The national survey of children's health 2007*. Rockville, Maryland.
- ³⁶Larson, K, Russ, S, Crail, J & Halfon, N (2008). Influence of multiple social risks on children's health. *Pediatrics* 121. Pp. 337-344. Wilkinson, E & Marmot, M (eds.) (2003). *Social determinants of health: The solid facts*. 2nd edition. World Health Organization: Denmark.
- ³⁷Chang, H & Romero, M (2008). *Present and accounted for: The critical importance of address chronic absence in the early grades*. The Annie E. Casey Foundation and the National Center for Children in Poverty: Baltimore MD and New York, NY.
- ³⁸Bruner, C & Stover-Wright M (2005). *Promising strategies in improving early elementary school attendance and success*. State Early Childhood Policy Technical Assistance Network Research Note: Des Moines, IA.
- ³⁹NAEP data explorer web guide. URL: <http://nces.ed.gov/nationsreportcard/naepdata/>.
- ⁴⁰Baer, J, Baldi, S, & Ayotee, K (2007). *The reading literacy of U.S. fourth-grade students in an international context: Results from the 2001 and 2006 progress in international reading literacy study (PIRLS)*. Institute for Education Sciences National Center for Education Statistics, United States Department of Education (NCES 2008-017): Washington, DC.
- ⁴¹Voices for America's Children (2010). *Are all America's children really above average?* Washington, DC.
- ⁴²Common Core State Standards Initiative (2010). *Common core state standards for English language arts, literacy in history/social studies, science, and technical subjects*. National Governors Association Center for Best Practices and Council of Chief State School Officers: Washington, DC. Retrieved at: www.corestandards.org/assets/CCSSI_ELA%20Standards.pdf.
- ⁴³Bruner, C (2009). *Opportunities to incorporate young child data into statewide longitudinal data systems through American recovery and reinvestment act (ARRA) funding*. Build Initiative: Portland, ME.
- ⁴⁴Pennsylvania State Department of Education (2008). *Pennsylvania information management systems*. Proposal to IES: R384A100014. Retrieved at: <http://nces.ed.gov/programs/slids/pdf/Pennsylvania2009-ARRA.pdf>.
- ⁴⁵Institute for Educational Sciences National Center for Education Statistics website. Statewide longitudinal data systems grant program. URL: <http://nces.ed.gov/programs/slids/state.asp?stateabbr=MS>.
- ⁴⁶Diversity and Equity Working Group (2006). *Building early childhood systems in a multi-ethnic society: An overview of Build's briefs on equity and diversity*. Build Initiative: Portland, ME.
- ⁴⁷Bruner, C & Emarita, B (2009). *Building public early childhood data systems for a multi-ethnic society*. Build Initiative: Portland, ME.



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