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Measuring Success: Using Assessments and Accountability to Raise Student Reading Levels and Achievement

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National Institute of Child Health and Human Development research has consistently shown that if children do not learn to understand and use language, to read and write, to calculate and reason mathematically, to solve problems, and to communicate their ideas and perspectives, their opportunities for a fulfilling and rewarding life are seriously compromised. Nowhere are these consequences more apparent than when children fail to learn to read. The development of reading skills

serves as THE major foundational academic ability for all school-based learning.

According to the National Center for Educational Statistics (1998), thirty-eight percent of fourth graders nationally cannot read at a basic level -- that is, they cannot read and understand a short paragraph of the type one would find in a simple children's book. By middle school, children who read well read at least ten million words during the school year. On the other hand, children with reading difficulties read less than 100,000 words during the same period. By high school, the potential of these students to enter college has decreased substantially. Students who have stayed in school long enough to reach high school tell us they hate to read because it is so difficult and it makes them feel "dumb." As a high school junior in one of our studies remarked, "I would rather have a root canal than read."

The educational and public health consequences

of this level of reading failure are dire. Of the ten to fifteen percent of children who will eventually drop out of school, over seventy-five percent will report difficulties learning to read. Of adolescents and young adults with criminal records, at least half have reading difficulties, and approximately half of children and adolescents with a history of substance abuse have reading problems. It goes without saying that failure to learn to read places children's futures and lives at risk for highly deleterious outcomes.

HOW READING DEVELOPS, AND WHY SO MANY OF OUR CHILDREN HAVE DIFFICULTIES LEARNING TO READ

Learning to read is a relatively lengthy process that begins very early in development and clearly before children enter formal schooling. Children who receive stimulating oral language and literacy experiences from birth onward appear to have an edge when it comes to vocabulary development and oral comprehensive abilities. However, the experiences that help develop vocabulary and general language and conceptual skills in preschoolers are different from the experiences that develop specific types of knowledge necessary to read, including knowledge about print, phonemic awareness, and spelling. These skills need to be explicitly taught. Preschool children who can recognize and discriminate letters of the alphabet are typically from homes in which materials such as magnetized letters and alphabet name books are present and are the source of teaching interactions with parents. The learning of letter names is also important because the names of many letters contain the sounds they most often represent. With this knowledge, the child is oriented to what is termed "the alphabetic principle" - a principle that explains how sounds of speech (phonemes) become associated with letters of the alphabet (phonics). Ultimately, children's ability to comprehend what they listen to and what they read is inextricably linked to the depth of their background knowledge. Very young children who are provided opportunities to learn, think, and talk about new areas of knowledge will gain much more from the reading process.

In essence, children who have difficulties learning

to read can be readily observed in the initial stages of their literacy development. They approach the reading of words and text in a laborious manner, demonstrating difficulties linking sounds (phonemes) to letters and letter patterns. Their reading is hesitant and characterized by frequent starts and stops and mispronunciations. Comprehension of the material being read is usually extremely poor. Usually, it is not because he or she is not smart enough. In fact, many children who have difficulty learning to read are bright and motivated to learn to read - at least initially. Their difficulties understanding what they have read occur because it takes far too long to read words, leaving little energy for remembering and comprehending what was read. Unfortunately, the slow and inaccurate reading of words cannot be improved in any appreciable way by using the context of what is read to help pronounce the words correctly. Consequently, while the fundamental purpose of reading is to derive meaning from print, the key to comprehension starts with the rapid and accurate reading of words. In fact, difficulties in decoding unfamiliar words and learning to recognize words rapidly are at the core of most reading difficulties. These difficulties can be traced systematically to initial difficulties in understanding that the language that is heard by the ear is actually composed of smaller segments of sound (e.g., phonemic awareness). And here we come full circle - many of these early difficulties in developing phonemic awareness are due to a lack of literacy and oral language interactions with adults during infancy and early childhood. Thus, because the environment most bereft of these interactions are those characterized by poverty, the cycle continues.

CAN CHILDREN WITH READING PROBLEMS OVERCOME THEIR DIFFICULTIES?

Yes. The majority of children who enter kindergarten and elementary school at risk of reading failure can learn to read at average or above levels, but only if they are identified early and provided with systematic, explicit, and intensive instruction in phonemic awareness, phonics, reading fluency, vocabulary, and reading comprehension strategies.

Research shows clearly though, that without systematic, focused, and intensive interventions, the majority of children rarely “catch up.” On the other hand, the early identification of children at risk for reading failure coupled with the provision of comprehensive early reading interventions can reduce the percentage of children reading below the basic level in the fourth grade (e.g., thirty-eight percent) to six percent or less.

ARE CERTAIN EARLY INTERVENTION APPROACHES MORE EFFECTIVE THAN OTHERS?

Yes. The National Reading Panel (NRP), convened by the NICHD and the Department of Education, found that intervention programs that provided systematic and explicit instruction in phonemic awareness, phonics, guided repeated reading to improve reading fluency, and direct instruction in vocabulary and reading comprehension strategies were significantly more effective than approaches that were less explicit and less focused on the reading skills to be taught (e.g., approaches that emphasize incidental learning of basic reading skills). The NRP found that children as young as four years of age benefited from instruction in phonemic awareness and the alphabetic principle. Likewise, youngsters who attended more academically oriented preschool programs had significantly higher scores in reading, math, and general knowledge when tested in the fall of their kindergarten year than children attending less academically oriented preschools. With the proper early instruction, the national problem of reading failures can be reduced significantly.

HOW IS THE ISSUE OF ASSESSMENT RELATED TO OUR ABILITY TO REDUCE READING FAILURE?

The NICHD and President Bush’s comprehensive reading programs recognize both the importance of assessment and the fact that assessments have multiple purposes, including early identification, diagnosis, program evaluation, and accountability.

There are four purposes of assessments:

- Early Identification - NICHD researchers routinely screen large numbers of children to identify those most in need of systematic, focused, and intensive early instruction. Screening is not diagnostic. That is, it does not provide the teacher with a detailed indication of the child’s specific reading problems and needs, but it can certainly save resources that would have to be provided later by identifying those children at greatest need for immediate intervention.
- Diagnosis - Identifying instructional needs, which is the purpose of diagnosis, helps the teacher plan instruction. It is closely linked to early identification, as extensive instructional planning is not necessary for every child. If one seeks to meet the goal of “leaving no child behind,” then teachers must know at the earliest possible moment that a student is falling behind, and at the same time, must know how to intervene to prevent the student from falling further behind. The assessment of risk status and educational progress in young children is frequently ignored on the premise that early educational progress is driven largely by maturational factors which dissipate with time, such that differences observed early in development will disappear with age. We know, however, that children do not outgrow reading problems. This attitude toward assessment and early systematic and focused interventions and prevention efforts produces devastating consequences for many young children, particularly children from poverty.
- Program Evaluation - States and local educational agencies need to know whether programs introduced in their local schools are effective. Within this context, norm-referenced tests can play a critical role, particularly if they are incorporated within research designs that will support inferences relevant to the specific effects of the intervention or program on student achievement. Norm-referenced tests assess transfer of learning. They essentially rank children within their grade level on how well they read. An assessment designed to rank individuals will not generally be effective for diagnosing problems, or providing prescriptive information to inform and guide

instructional practices and the specific focus of an intervention. However, such norm-referenced assessments can help determine the “value-added” contribution of specific instructional programs and/or strategies by assessing whether we achieve the ultimate purpose of the reading programs, which is to literally alter the distribution of reading skills in our country and improve the reading of every child.

■ Accountability - States and local educational agencies may consider developing assessments that assess mastery of the educational content they deem critical to their academic, economic, and civic success. This type of assessment is usually done through mastery assessments, also known as criterion-referenced tests. Effective assessment in this domain demands clarity in the specification of educational objectives, both with regard to the content to be learned and the skills to be acquired, and the ways in which students must be able to demonstrate content and skill mastery. However, an assessment designed to evaluate mastery of key skills will not generally be effective for distinguishing between students whose performance exceeds a criterion and those who fall short of the mark. As noted earlier, norm-referenced assessments perform this task. Similarly, a norm-referenced assessment that ranks children doesn't address whether teachers are teaching effectively and whether children are mastering what the State and/or the local educational agency deems important. Such

assessments should be done yearly beginning in Grade 3 so that we know how well our schools are performing.

The NICHD and the President's reading initiatives ensure that locally determined and implemented programs for the assessment and evaluation of programmatic effectiveness are at the core of this critical program. Indeed, the success of this comprehensive early reading program depends on our knowing what works and what is ineffective, and modifying our efforts as quickly as possible when the latter is identified.

What we have identified pertaining to reading assessment and accountability points directly to this being a time of great opportunity for the federal and state governments, local educational agencies, teachers, and parents to work together toward the common objective of eliminating the reading deficit in America. Through scientific inquiry, we have identified the elements of an optimal reading program. We know how to measure a child's progress toward reading with fluency and comprehension. We know how to assist teachers in acquiring the skills necessary to teach reading effectively. We know how to reach the most vulnerable children in our nation with the essential skills they need to learn to read. All that remains now is to apply what we have learned in America's classrooms.

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