The Importance of Knowledge in Early Learning Development

Several years ago, in collaboration with Kathy Roskos, I was studying the effects of placing reading and writing props in a play setting as a way of enhancing children's concepts of print in a Head Start center. After a 7-month period, using an assessment task developed by Lea McGee and Richard Lomax, I asked 4-year old Terrell to identify several objects and to describe their use. Specifically, the assessment was to determine whether a child's involvement with objects like a letter, a coupon, or a telephone book in a literacy-related play setting might lead to greater understandings of the objects and its purposes. Pointing to the business letter inside an envelope, I asked, "What's this?" "A mail," he said. Even though the protocol called for a dichotomous yes or no, it was hard not to resist writing, sort of. Following the initial prompt, I asked him what the object could be used for. He did not respond. Continuing down the list to other literacy-related objects, I found that they too, were "a mail."

At the time, I assumed an instrumentation error—the instrument was obviously insensitive to a child's language and way with words. The objects had been taken out of the setting, and had, perhaps, lost their meaning. But it was also true that although Terrell had been very active in the office play setting, his activities had focused primarily on manipulating objects. Still, I was convinced that due to his interest, and activity, Terrell would be ready for kindergarten instruction. I even conveyed this message to his parent, so confident was I that he would succeed in reading.

I am not so optimistic any more. In fact, today I believe it is questionable whether a child demonstrating skills like Terrell's would be ready for kindergarten, even given his

interest and obvious intelligence. What I failed to recognize in constructing this play settings was that Terrell needed more than theme-related objects. He needed to learn the words and beginning understanding about what people might do in an office and why one might write a letter. He needed knowledge and vocabulary to convey his ideas. And with such instruction, I suspect that Terrell would have begun to develop the narrative routines, the concepts and the problem-solving strategies that are in fact related to reading success.

What were the fundamental major misconceptions? We:

- Overestimated the 'power' of the environment. While it has a coercive effect, it does not teach
- Overestimated child's ability to self-teach
- Overestimated child's ability to catch up once he or she falls behind

Why Failure in Beginning Reading?

Although Americans tend to do well in international comparisons of reading, it is the concentration of readers in poor, urban neighborhoods that continue to be at risk for failure in reading. On average, children at risk grow up with lower incomes, less nutritious diets, unhealthier environments, and poor medical care. They are likely to come from home environments that may value education, but have neither the physical or social conditions to support it entirely.

Focusing specifically on early skill accomplishments, Keith Stanovich developed the "Matthew Effect" which places phonological processing and print exposure at the

center of reading acquisition. In short, he argues that children who develop efficient decoding processes early on are likely to be able to concentrate on the meaning of the text. They will read more, practice, and get better at it, enjoying the riches of reading. But unfortunately, children who do not become proficient in these skills begin a negative spiral. These are the children with limited exposure to print, limited opportunity to hear language in print, have difficulty developing an understanding of the code, avoid reading, read little, and achieve less.

The third reason is poor instruction. Bruner for example, found that most early childhood settings are not providing the language opportunities children need. And we know that children need much instruction in language. Hart and Risley's study of meaningful differences for example, reported an astonishing figure. Middle-class parents spoke approximately 300 words per hour to their children, compared with only few for welfare moms and their children. The child from middle-class homes at age 3 had a similar vocabulary level to those of the welfare moms. In fact, Hart and Risley estimated that it would take 41 hours a week of extra intervention to make up for these disparities. Consequently, adequate instruction is not enough--we need intensive, high quality instruction. And if these learning needs are ignored, problems will only become compounded and the negative cycle will continue.

What is striking in the descriptions of these risk factors is their potential 'alterability.' We can change them far more easily than difficulties related to illness and inherent abilities. But we must have the will and will must take the effort to do so.

How much knowledge are we teaching in the early years in prekindergarten settings?

Not much. Several new studies provide a clarion call. For example, Taylor and Pearson in their study of primary grade achievement in 14 schools examined content learning in 1-3 grades. They emphasized these particular grades since it would be clear that comprehension and learning must be emphasized by this time.

They found that comprehension instruction was minimal, rarely seen. Here were the common strategies used in these grades to teach content:

- picture walks
- text-based questions
- aesthetic response
- completing a workbook page
- retelling a story

Rarely could they document any instance of what we would think is normal in schools—instruction by the teacher.

Now let's look at an even more disturbing picture. Now let's visit the preschool setting. Look at the common schedules of children in prekindergarten. As you will see, in the picture, in prek's all across the country we are seeing activities with little emphasis on content knowledge, objectives, and language activities. (show charts). Yet even in prek's, intentional teaching is the key to ensure that our children have the knowledge and skills that will allow them to succeed in kindergarten.

How might we build content knowledge in prekindergarten?

Books are key in children's learning of language. Stanovich compared 'rare vocabulary words' the type of words that are beyond the child's current lexicon. And he found that more words are found in books than in other avenues, such as conversation, television, and magazine reading. Dickinson in his study of over 100 preschools found limited attention to book reading. In our work we found teachers rarely asking children questions about a book.

We need to be more intentional in our book reading with children. Many times there is an over reliance on predictable text, such as "brown bear brown bear what do you see? I see a red bird looking at me." Sweet words, but highly familiar to children.

Nell Duke in a recent study found that the greater source of rare words came not from narrative text, or stories, but informational books. Yet in 79 full days of observation, she found only 3.6 minutes devoted to informational text in 20 schools. This is particularly concerning when we examine a study by Smolkin and Donovan. They compared the 'discourse' moves or turns at speaking in group discussion with informational books and narrative—Interactions produced 354 discourse moves, compared to only 42 in story books. This of course does not suggest that we only read informational books; however, it does suggest that we need to include these books more often for children.

Experiences that enrich children's ability to problem solve is also critical for content knowledge development. Too often our children have holiday-based learning—they hear about Halloween for years, Thanksgiving, Easter…but rarely does that build a knowledge base for content and learning. Often the thematic instruction involves a theme that is only in the 'teachers perspective' and not the child's. We need curriculum that helps teachers focus on objectives, goals, and words to be learned and practiced, with deeper experiences to ensure that these ideas are memorable for children.

Teachers need to develop strategies for ongoing assessment to determine if children have learned what has been taught. Observation, alone cannot help us know whether the child understood concepts, and can use language to express his or her ideas.

Children also need to develop critical skills in these early years. Susan Landry will be talking about the importance of phonological development, letter name knowledge, and concepts of print that need to be established in these early years. However, if this isn't done well, in a way that is meaningful to children, it will not ultimately be used to gain new knowledge and more thoughtful concepts. Cutting and pasting a letter of the week is not the way to convey such learnings.

So how do we improve early literacy instruction for children at risk?

In the field of early childhood we have often dichotomized learning, privileging either process (or how children learn) or content (or what children learn). Some argue that developing a content knowledge base is insensitive to children's interests and ways of learning.

The fact is, more often than not, young children at risk have had neither good process or content taught meaningful. They have been subjected to intellectually trivial activities, with an overemphasis on 'cute, hands on learning.' In a study of Title 1 prek's Seppanen and colleagues could find absolutely no evidence of experiences in math, language and science for children. Minds atrophy under such conditions.

Rather than an either or, we must strive for a both-and. Limited access to knowledge in the early years, places constraints on children's ability to develop new knowledge. The knowledge gap hypothesis suggests that knowledge produces more knowledge—with the information haves reading more, learning more, create new existing pools of knowledge. And greater use of knowledge enhances speed of acquisition, which, if we are not diligent is, over time, likely to accelerate a knowledge gap between those who have access and those who do not.

It is not enough for children in this 21 century to read or write at basic levels. Such minimal expectation will only exacerbate inequality. Rather, teachers must ensure that children develop factual knowledge which has coherence and depth. They must

learn skills to use this knowledge to develop even more complex ideas and concepts. Our children deserve no less.