

SEEL Rationale & Framework

Federal mandates under the No Child Left Behind Act (NCLB) have required changes to the ways reading is taught to school-age children. The *Report of the National Reading Panel* (2002) listed components essential for reading proficiency (phonemic awareness, phonics, fluency, vocabulary, and comprehension). In efforts to meet the literacy goals of NCLB and related programs (Early Reading First and Reading First), educators increased the frequency and intensity of teacher-directed activities, focusing particularly on phonological/phonemic awareness and fluency. In elementary schools, the efforts to meet literacy goals of NCLB and Reading First sometimes have resulted in actions like eliminating recess (so there is more time on task) and in preschools and kindergartens, reducing the size of play areas and replacing playful activities with more structured, teacher-directed activities targeting alphabetic knowledge and phonological awareness (Golinkoff, Hirsh-Basek, & Singer, 2006). Researchers acknowledge that reading requires two related, but separate capabilities, (1) broad knowledge of a language, and (2) understanding the mapping between language and print, which relies on phonological awareness and alphabet knowledge (Hoover & Gough, 1990). Many current educational practices in kindergarten-3rd grades, however, have focused on development of the mapping between language and print. Consequently, considerable attention has given to development of phonological awareness skills and alphabet knowledge. Although phonological awareness/phonemic awareness skills are important for emergent literacy, they are insufficient by themselves for ensuring the development of text comprehension, which is the ultimate goal of literacy.

Despite the emphasis placed on skill development in response to NCLB, a study reviewing the effects of Reading First, *Reading First Impact Study: Interim Report*, indicated that the program did not increase the percentages of students in grades one, two or three whose reading comprehension scores were at or above grade level.” Whitehurst, director of the Institute of Education Sciences, the Education Department's research arm, suggested that it was possible that “in implementing Reading First, there is a greater emphasis on decoding skills and not enough emphasis, or maybe not correctly structured emphasis, on reading comprehension. He further suggested said the program's approach might be effective in helping students learn building-block skills but that it did take children far enough along to have a significant impact on comprehension. The *National Evaluation of Early Reading First*, which focused on preschool children, found that the program had a positive impact on children's print and letter knowledge, but not on phonological awareness or oral language, which were also targeted. Although the reading methods employed in Early Reading First and Reading First projects were all to be evidence-based, they did not result in better oral language and comprehension – which were the desired ultimate outcomes.

To comprehend discourse, whether heard, read, or watched, children must build mental models of texts (Perfetti, 1997; Yuill & Oakhill, 1991). Multiple levels of mental representation are necessary for developing these mental models. At the microstructure level, mental modeling requires understanding of the words and syntax of the text – and the words and syntax of written texts are more abstract and complex than the words and

syntax of oral texts – they are more decontextualized (Zwiers, 2008). At the macrostructure level, persons must understand the temporal and cause-effect relationships that exist among people, objects, and events, and they must possess a theory of mind (ToM). ToM has both intrapersonal and interpersonal components (Lucariello, 2004). Intrapersonal ToM involves children’s ability to reflect on their own understanding, thoughts, and feelings. Intrapersonal ToM is essential if children are to monitor and self-regulate their own behavior and learning. Using intrapersonal ToM, children reflect on their attitudes towards activities, determine if they understand or do not understand, and decide what they might do when they do not understand. Interpersonal ToM involves the realization that others have thoughts, feelings, and beliefs. Interpersonal ToM is essential for children to project into the thoughts and feelings of others (such as characters in stories), and the ability to use this knowledge to reason about persons’ behaviors. Children must then use working memory to integrate the microstructure and macrostructure elements of their models with information and experiences they pull from their long-term memory to develop a complete mental model for a discourse. Children’s mental models enable them to inference – to “read between the lines of a discourse.” Without the ability to inference, discourse comprehension is limited to literal understanding.

What can be done to promote children’s mental modeling? Mental modeling is not unique to processing written text. It is essential for comprehension of all extended discourse. Pretend play provides children with both a way to show their mental representation of the world and a way for them to learn about objects, events, and relationships in the world (Lifter & Bloom, 1998). It is this understanding of the temporal and cause-effect relationships in the world that children must bring to the task of mental modeling of texts. Furthermore, pretend play is a manifestation of ToM because it requires children to distinguish between what happens in the world and what occurs in the mind. Children must be able to attend to and interpret the intentions of one another as they play. This requires that they be able to observe affect and use language and social experiences to interpret the significance of that affect (Garfield, Peterson, & Perry, 2000). In play they are learning to make a variety of inferences.

Pretend play has also been linked to the use of the type of language functions and decontextualized language used in literacy. Higher levels of symbolic play and literacy both require the ability to comprehend and use language without the benefit of contextual support from the environment. Children who exhibit greater decontextualization in their play by substituting objects (e.g., using a chair as a train) or taking on imaginative roles (e.g., I’m an astronaut) also use more explicit, decontextualized language involving elaborated noun phrases, temporal and causal conjunctions, past tense and future aspect, and metacognitive verbs (Pellegrini, 1985). Inability to use decontextualized language has been associated with lack of academic success (Michaels & Collins, 1984; Zwiers, 2008). They also use language for a wider variety of functions (reporting, predicting, reasoning, and projecting into the thoughts and feelings of others. Pretend play, thus, provides a mechanism for developing and practicing the cognitive and linguistic skills that underlie text comprehension.

Despite the potential value of play in early childhood education, the current emphasis on early literacy skills has put the educational and therapeutic use of play under siege. A number of early childhood specialists, however, are calling for the return of play in the curriculum. For example, the national Zero to Three organization published a book entitled, *Children's Play: The Roots of Reading* (Zigler, Singer, & Bishop-Josef, 2004) and in 2005, Singer, Golinkoff, and Hirsh-Pasek hosted a conference called, Play = Learning, at Yale University. In both of these efforts, the intent was to make the point that play is essential to children's growth and healthy development of social and academic skills.

SEEL addresses both components essential for reading – phonological awareness skills and broad-based language skills that underlie comprehension. Furthermore, it uses a playful practice dynamic systems approach in teaching both components of reading.

Many research-based reading interventions rely on highly structured, teacher-led activities that teach one or two skills at a time. Although there is research evidence for many of the programs that are used and children generally do learn the specific skills that are taught, there has no change in the numbers of children achieving reading proficiency on Reading First evaluations and on the National Assessment of Educational Progress in Reading (NAEP, 2007). What might contribute to the limited effectiveness of the teaching of specific language/literacy skills that are considered to form the basis of literacy? In practice, children do not learn one aspect of language at a time – the components of language are interactive and children are acquiring all components simultaneously. Current theories of language development view language as an emergent process (Evans, in press; McWhinney, 1999). An emergent perspective on language and literacy relies on a dynamic systems approach or what Nelson and colleagues (2004; in press) have termed “a dynamic tricky mix” to explain how language emerges in both neurotypical children and children with language impairments. A complexity of factors influence children's language learning. The approach is considered a tricky mix, because there is no one mix that is ideal for every child. These factors interact in different ways in different children. Intervention with children involves keeping track of the complexity of factors influencing children's language performance and providing ways of boosting children's depth of engagement so that their learning emerges. Nelson and colleagues propose that it is possible to dramatically accelerate a child's language/literacy learning when one considers a convergence of conditions that promote learning.

How can one address the complexity of multiple language skills that children require for development of the decoding and language skills essential for literacy? SEEL employs a dynamic tricky mix framework to promote the cognitive/language skills essential for emergent literacy. According to Nelson's concept of a dynamic tricky mix, to promote development, educators need to ensure that the following elements related to lesson structure and what individual children bring to the literacy learning task. A dynamic tricky mix approach considers the multiple complex conditions that need to converge at or above threshold levels to support learning at the highest rates. When all the components contribute to learning, children develop a deep enjoyment and absorption in the activity of learning. Nelson proposed the LEARN acronym as a way of organizing

these components. The nature of the SEEL curriculum exemplifies the LEARN components.

- **Launching Conditions.** Children will become more involved in tasks and will better remember tasks, if they are motivated to participate and challenged appropriately by the tasks. SEEL employs engaging, playful activities, rather than drill or worksheet activities to promote phonological awareness and discourse comprehension. SEEL teachers have commented that the activities “hook” the children so that they excitedly become engaged in the activities. Drill and worksheet can develop semantic memory (for words and concepts) and procedural memory (scriptal memories for how activities are to be done), but they are unlikely to promote episodic or autobiographical memory. Episodic memory links the emotional experience of the event with the what, when, and how of the event. Episodic memory enables children to have memory for their subjective experiences throughout time and to perceive the present moment as both a continuation of their past and as a prelude to their future (Tulving, 1993). This type of memory makes it possible for children to have conscious recollection of personal happenings and events from one’s personal past and mental projection of anticipated events into one’s future. Episodic memory enables children to better recall the experience and to transfer the learning to other situations. Episodic memory enables making predictions and inferences (which are essential for text comprehension). Teachers have reported that children are remembering the SEEL activities from day to day and week to week.
- **Enhancing Conditions.** Language and literacy are socially constructed. Language learning is dependent on the guidance or scaffolding support of others that promotes shared meaning. Social interactions enhance learning, particularly when in this process children develop self-regulation and begin to be able guide and monitor their own learning. Within the context of engaging, playful activities, the SEEL curriculum involves teachers in carefully scaffolding their interactions with children in both the phonological awareness and comprehension components of the program. Teachers provide explicit, intense instruction in phonological awareness skills and model language that:
 - Clearly describes the children’s activities and the activities of characters in books. Children learn to use language to vividly report their activities and the products they produce and to report events of a story they have heard. Such reporting language can form a basis for the development of language children can use to regulate their own behavior.
 - Explains reasons for the children’s SEEL activities and the reasons for characters’ behaviors in books. Children learn to use language to reason about and evaluate their own behavior and the behavior of characters in stories.
 - Refers to thoughts and feelings of the child and characters in stories. Modeling of this type of language is critical for the development of both interpersonal theory of mind (thinking about what someone else or a character in a story is thinking or feeling) and intrapersonal theory of mind (which involves reflecting on one’s own thoughts and feelings). If children are to

comprehend stories, they must be able to understand the perspective of the characters. And if they are to develop self-regulation of their own behavior, they must be able to reflect on what they know and do not know, how they feel about and activities or events, and how they respond to these activities and events. Development of both types of theory of mind is highly dependent on children being around adults who model the language of the two types of theory of mind (Lucariello, 2004).

- Predicts what will happen if... in activities and stories. Children must be able to predict consequences of their own behaviors and the consequences of the behaviors of characters in stories. Such prediction is dependent on the use of episodic memory (mentioned in the Launch Conditions section). One cannot predict if one cannot connect the present situation without other experiences – and such connections are dependent on episodic memory which is dependent on an emotional base. When modeling predicting language, teachers must link the present experience to past experiences and knowledge, and then suggest logical relationships to future situations. Predictions cannot be just wild guesses.

Learning of new communication skills is further enhanced by settings and strategies that focus children's attention and encourage planfulness and monitoring of plans. The playful nature of the activities engages children so they attend, and creative aspects of the activities involves the children in planning how they will do the activities and monitoring the outcomes of their activities.

- **Adjusting Conditions.** Adjusting Conditions are of two types: (1) the adjustments teachers make to lessons based upon their observation and evaluation of children's response to activities, and (2) the adjustments children make as a result of their attitudes about the task and their capability to do the task. SEEL teachers in a school participate in Lesson Study, a professional development process in which they systematically examine their practice. Teachers collaborate to plan, observe, and refine a lesson. The goal of lesson study is to improve the effectiveness of the experiences that the teachers provide to their students (Stigler & Hiebert, 1999). Through lesson study, teachers identify what is working and what is not working for students as a whole and for individual students. They identify and develop strategies to improve their lessons to better meet the needs of their children.

Children are not all at the same developmental levels. Consequently, teachers identify the degree of support and practice that individual children require. Children in Tier 1 learn the concepts through the whole class and small group sessions that are held for all children. Some children, Tier 2, will require additional playful experiences to develop the concepts. The SEEL curriculum provides multiple activities for each concept so that Tier 2 children are not simply redoing the same tasks they did in the general class large and small group activities. Tier 3 children are children who make very slow progress even with Tier 2 support. School personnel (tutors, special educators, speech/language pathologists) providing additional support to Tier 3 children use SEEL activities with individual children or groups of 2-3 children.

Through lesson study and collaboration, teachers and support personnel ensure that children at all tiers are receiving the curriculum in developmentally appropriate ways.

Children themselves make adjustments to how they approach learning activities. Children, with both high and low ability, who desire to learn material for the sake of learning or because they enjoy the learning activities are likely to persist as tasks become more challenging. In contrast, children who view focus on a final product or evaluation of performance (especially if they are of lower ability), are less likely to persist as tasks become challenging (Elliot & Dweck, 1988). In interviews, teachers using SEEL have reported that even Tier 3 children have remained engaged throughout the year by the playful activities. They noted that children in the SEEL program have not shown frustration with literacy activities that they in children in previous years when they did not use a SEEL approach. One teacher attributed this to the fact that children saw a purpose for learning (to participate in the activities) that children who were taught discrete skills did not perceive.

- Readiness Conditions. Readiness conditions refer to children's language/literacy skills when they enter the program. Teachers must know the language/literacy skills children have when they enter the program and they must monitor children's development over the course of the program so that they can adapt the program as needed for individual children.
- Network conditions. Knowledge is best remembered and used when it is consolidated or linked to/networked with other knowledge. This is essential for developing the neural networks essential for representational thought. All SEEL activities involve theme-based, playful experiences rather than isolated skill-based drills or lessons. Hence, networking of knowledge is facilitated. For example, children play with words rhyming with -uck. They listen to a story, *One Duck Stuck*, of a duck who gets stuck in the muck. As the teacher reads the story, she encourages the children to describe how the duck became stuck in the muck and explain how the duck was finally able to get out of the muck. They discuss how the duck might have felt while she was stuck and how she felt when she got out of the muck. They compare this story with *Duck in the Truck*. The children make muck (with pudding; or ground, moistened oreos; or water and dirt). They feel the muck and get items stuck in muck; they pluck items from the muck; they stick their hands in the muck and proclaim, "Yuck, I'm stuck in muck." They report their experiences of getting things stuck in muck. They explain why things can get stuck in muck, but not water. They re-enact the stories of *One Duck Stuck* and *Duck in the Truck*. They sing a song about duck behaviors. Throughout the day (and week), teachers highlight other examples of -uck and vocabulary and concepts from the story. Such experiences are multi-sensory -- they integrate visual, auditory, tactile (and potentially taste and smell) experiences, thus promoting neural networking.

Playful practice promotes neural networking because in the process of playing and re-enacting stories, children are using all of their senses. They are using language in meaningful contexts and in so doing they are developing an understanding of the

relationships among people, objects, and events that are reflected in narrative and expository texts and in developing the complex oral language skills necessary to convey these relationships.

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