Advancing Quality School Readiness Programs in Early Childhood through Systematic Change

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The University of Texas Health Science
With grants from IES, NIH, and USDOE, the Children’s Learning Institute experimentally confirmed the necessary combination of key instructional components that maximize positive change for teachers and children across a wide variety of early preschool programs.

These results provided the design for TEEM: The Texas Early Education Model.
What is the Focus for Preschool Children?

• Develop phonological awareness, letter knowledge and early writing
• Understand and use increasingly complex and varied language
• Develop and demonstrate an appreciation for books
• Develop math skills
• Develop social and emotional competence
• Use language to communicate for a variety of purposes

To become School Ready!
Instructional Approaches: 5 Key Areas for Quality

1. Use of **Responsive Interaction** style to support learning
2. **Content** that predicts school readiness
3. Planning that takes advantage of recent brain research: development of **memories**
4. A **balance** of teaching strategies
5. Flexible **groupings** of children for learning—one-to-one, small groups, large groups
6 Key Essentials for Optimal Support of Young Children’s Cognitive and Social Development

- Rich language input
  - Use of labels for objects & actions
  - Providing explanations & rationales
  - Frequent book reading on many topics
- Responsiveness to children’s signals
- Maintaining and building on interests
- Fewer restrictions
- More choice providing strategies
- Monitoring children’s behavior
Focus of Teacher Attention: Responsive Style + Content Plan

Build Experiences:
Memories + Balance + Variety in groupings
Goal:
Bring content together with responsive interaction style
Three Key Domains Research Says Predict Reading Success

**Oral Language**
They acquire vocabulary that informs them about the world; they use language to construct relationships and categories, to figure things out, and to solve problems. They also use language to express ideas and participate in social contexts.

**Phonological Awareness**
They demonstrate sensitivity to, manipulation of, and use of sounds in words.

**Print Knowledge**
They demonstrate knowledge of the units of print (letters, words) and ability to translate print to sound and sound to print (letter-to-sound) and understanding of book and print concepts.
Skill Domains in Mathematics

**Numbers & Operations**
Numbers can be used to tell us how many, describe order, and measure.

**Geometry**
Geometry can be used to understand and to represent the objects directions, locations in our world and relationships between them.

**Measurement**
Comparing and measuring can be used to specify “how much” of an attribute (e.g. length) objects possess.

**Data Analysis**
Data analysis can be used to classify, represent, and use information to ask and answer questions.

**Algebra**
Patterns can be used to recognize relationships and can be extended to make generalizations.
**Understanding Emotions**: Inferring basic emotions from expressions or situations and understanding the consequence of basic emotions.

**Behavioral & Emotion Regulation**: Use of emotional gestures and verbalizations to express feelings in a social situation; inhibition of socially disapproved expressions of emotion (hitting, tantrums, biting)

**Initiating and Maintaining Positive Engagement with Peers**: Ability to be effective in interactions with peers, the result of organized behaviors that meet short-term and long-term developmental needs (cooperating, listening, turn taking, seeking help)
# Bringing Content and Responsive Interactions Together

## Scaffolding

<table>
<thead>
<tr>
<th>Skills</th>
<th>Phonological Awareness</th>
<th>Skills</th>
<th>Background Knowledge</th>
<th>Skills</th>
<th>Vocabulary</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

- pacing
- demonstrations
- questioning
- commenting
- challenge new discoveries
- gestures
- modeling
- observation
- find teachable moments
- responsiveness
Incorporating what research tells us about the appropriate developmental sequence within content areas
Developmental Progression
From Younger to Mid to End of Pre-K

**Language Level:** Expresses ideas with two to three word utterances

**Language Level:** Talks in complete sentences and has a vocabulary of 1500 to 2500 words

**Language Level:** Explains past events in detail to others and has a vocabulary of 4000 to 6000 words
### Link Preschool Skills to Kindergarten Skills

Connect expectations to those that lay ahead...

**Early Reading**

<table>
<thead>
<tr>
<th>Preschool</th>
<th>Primary Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>• oral language</td>
<td>• reading vocabulary</td>
</tr>
<tr>
<td>• background knowledge</td>
<td>• reading comprehension</td>
</tr>
<tr>
<td>• phonological processing</td>
<td>• decoding of words</td>
</tr>
<tr>
<td>• print knowledge</td>
<td>• fluency and spelling</td>
</tr>
</tbody>
</table>

- Reading vocabulary
- Reading comprehension
- Decoding of words
- Fluency and spelling
Efficient Development of Memories

Planning that takes advantage of recent brain research
Teacher planning that efficiently builds background knowledge

“The Time Windows”: child develops networks of associations with repeated learning experiences that are related in content

<table>
<thead>
<tr>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>(8:00 AM)</td>
<td>(9:30 AM)</td>
<td>(10:00 AM)</td>
</tr>
<tr>
<td><strong>Circle Time</strong></td>
<td><strong>Read Aloud</strong></td>
<td><strong>Writing Center</strong></td>
</tr>
<tr>
<td>Students report on trip to construction site, discuss target vocabulary</td>
<td>Book on building a house with vocabulary discussion</td>
<td>Class made books of field trip to construction site</td>
</tr>
</tbody>
</table>
Efficient Development of Memories
Bringing the theme into the classroom

**Block Center**
Books about construction and objects that allow for “construction” play

**Listening Center**
Syllabication game
Look at construction pictures and tally number of syllables

**Writing Center**
Make a class book about things you build that start with the letter h
example: hospital, house, hotel

**Individual Progress Monitoring and Re-teaching**
Balance of Teaching Strategies

Direct and Indirect Instruction
Direct & Indirect Instruction

Teaching alliteration – Beginning sounds of words

**Large group:**
Read Aloud
“A My Name is Alice”

**Small group:**
Teacher and student use mirror to practice alliteration

Teaching alliteration – Beginning sounds of words

- Puppet play that focuses on beginning sounds
- Writing activity – class made book on beginning /p/ sound
- Transitions, songs and games like Willabee Wallabee Walice
Flexible groupings of children for learning

One on one
Small groups
Large Groups
A critically important goal in early childhood is to understand the individual progress and needs of children.
Evaluating what it takes to support teachers to have high quality programs
Three Key Instructional Components

- Research Tested Curriculum
- Web-Based Professional Development with Classroom Mentors
- Technology-Driven Monitoring of Child Learning
eCIRCLE

Why does it work?

Content based on years of scientific research
- Read-alouds
- Phonological awareness
- Classroom management
- Writing
- Letter knowledge
- Building vocabulary
- Supporting children’s talk
- Using names and more

Pedagogy focused on understanding children’s zone of proximal development
- Modeling
- Supporting practice
- Promoting independent mastery

Training
- Face to face
- Online

Features commentary from early childhood experts Susan Landry, Kathy Roskos, Lesley Morrow, Dorothy Strickland, Prentice Starkey, Alice Klein and Chris Lonigan along with input from excellent practitioners.
Progress Monitoring

- Displays **guided prompts and instructions** to help teachers learn and conduct the assessment, and incorporates **automatic scoring and timing** to ensure accurate administration and reliable results.

- Provides **immediate feedback** on a child's performance so teachers can quickly review individual progress at any time.

- Allows teachers to create **evolving portfolios** that include observations of socio-emotional development, book and print awareness, and early writing skills, as well as **handwritten notes and digital pictures**.

- Suggests **classroom activities** targeted for the whole class, groups of children with needs in a particular area, and individual children.

- With the push of a button, uploads assessment results and observations recorded on the handheld to a secure Web site, where teachers can view and print rich **class, group, and individual reports**.

- Helps guide the professional development of early childhood educators with **observational checklists**.

Also available in Spanish.
Participants: Schools & Teachers

- OH, MD, FL, TX
- 158 Schools
  - Head Start
  - Child care
  - Public school PreK
- 265 Preschool teachers
4 Treatment (PD) groups vs. “business as usual” control group:

<table>
<thead>
<tr>
<th>Mentoring Condition</th>
<th>Feedback Condition</th>
<th>PD Group 1</th>
<th>PD Group 2</th>
<th>PD Group 3</th>
<th>PD Group 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Limited</td>
<td></td>
<td></td>
<td>PD Group 1</td>
<td>PD Group 2</td>
</tr>
<tr>
<td>No</td>
<td>Limited</td>
<td>PD Group 3</td>
<td>PD Group 4</td>
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<td></td>
</tr>
<tr>
<td>No</td>
<td>Detailed</td>
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<tr>
<td>No</td>
<td>Detailed</td>
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</table>
Participants: Children

- 1,786 children assessed
- Children ranged from 3- to 5-years-old
- 50% boys
- 27% ESL
- 17% Caucasian, 34% African American, 42% Hispanic American, 2% Asian, 5% Other
Examples of Scales on Teacher Behavior Rating System

- Shared reading
- Lesson planning
- Oral language instruction
- Writing instruction
- Team teaching
- Letter knowledge instruction
- Phonological awareness instruction
- Use of assessment
- Classroom management
- Responsive Interactions
Intervention Effects on Change in Teachers’ Instructional Practices

Total Score

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Mentor_Palm</th>
<th>Mentor_Pencil</th>
<th>Nomentor_Palm</th>
<th>Nomentor_Pencil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>1.11</td>
<td></td>
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<td></td>
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</tbody>
</table>
Intervention Effects on Change in Teachers’ Instructional Practices

Written Expression

<table>
<thead>
<tr>
<th>Condition</th>
<th>Proportion of post test scores &gt; 1 (3 pt. scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>0.16</td>
</tr>
<tr>
<td>Mentor_Palm</td>
<td>0.68</td>
</tr>
<tr>
<td>Mentor_Pencil</td>
<td>0.55</td>
</tr>
<tr>
<td>Nomentor_Palm</td>
<td>0.40</td>
</tr>
<tr>
<td>Nomentor_Pencil</td>
<td>0.35</td>
</tr>
</tbody>
</table>

Effect on Written Expression:
- Mentor_Palm: $\text{Effect} = 0.66$
Intervention Effects on Change in Teachers’ Instructional Practices

**Print and Letter Knowledge Quality Rating (4 pt. scale)**

- **Mentor_Palm**: Effect = 1.38
- **Nomentor_Palm**:
- **Nomentor_Pencil**:

Comparison of different groups showing the impact of mentoring on the quality of print and letter knowledge.
Child Language Skills

Post-Test Scores (raw scores)

- Control
- Target Mentor_Palm
- Target Mentor_Pencil
- Target Nmentor_Palm
- Target Nmentor_Pencil

-1SD on Pretest
Pretest Mean
+1SD on Pretest
Bringing the program to Texas
Expansion of TEEM

Increased Number of School Ready Children

Year 1 (SB 76): 2,000 children in 11 communities in 2003-04
Year 2 (SB 76): 4,500 children in 15 communities in 2004-05
Year 3 (SB 23): 13,000 children in 20 communities in 2005-06
Year 4 (SB 23): 25,000 children in 32 communities in 2006-07
Year 5: 40,000 children in 38 communities in 2007-08
Year 6: 62,000 children in 38 communities in 2008-09
TEEM Communities Established by SB 76 ('03) & 23 ('05)

Goal:
Improve school readiness and increase access to quality early childhood programs for Texas

Problem:
Extremely high percentage of Texas children enter Kindergarten not ready to succeed

- Independent School District
- Head Start Program
- Faith Based Program
- Non-Profit & For Profit Child Care
- New Sites
For More Information

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