Features of Prekindergarten Classroom Quality and the Relationship to Children’s Language and Literacy Development

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Sandra Jo Wilson
Early literacy and language skills are predictive of later success.

Language is an especially potent predictor.

Efforts to foster early literacy using programmatic approaches:

- Effects often are seen on print knowledge and sometimes on phonological awareness.
- Effects on language are not often found.
Early Reading First

- To create preschools that are effective in supporting early literacy.
- Funding for sustained professional development and coaching
- Required use of an approved curriculum
- External evaluators measured
  - Classroom quality (ELLCO)
  - Child growth: PPVT, PALS print and PA
  - Site-specific additions
Data collection done by Sandra Jo Wilson, Peabody Research Institute

Fall and spring classroom observations:
- ELLCO checklists and rubrics
- Fidelity of Implementation of OWL
- Narrative Record of time use, Child Engagement

Child assessments
- PPVT-4
- Woodcock-Johnson Letter-Word, Spelling, Picture Vocabulary, Comprehension
- PALS Upper Case, Rhyming, Initial Sounds
- Write Start! Writing assessment (Rowe)
Four years of support:
- N = 10 (year 1); n = 13 classrooms (years 2 – 4)

Targeted schools with ELL populations.
- ELL percentages
  - Year one: 22% (14% Hispanic)
  - Years two – four:
    - roughly 45% ELL,
    - 1/3 Hispanic
  - Other groups: Kurdish, Somali, Egyptian, Vietnamese

- African-American:
  - 67% year one,
  - 48% years 2 – 4; While: 7 - 9%

Gender roughly equal
- All met income guidelines for state pre-k eligibility
Coaching and PD

- One coach to every four classrooms.
- Group professional development sessions about 4 times a year.
  - Special foci: ELL children, book reading methods, writing support, conceptually-guided teaching
- Coaches supported through regular project meetings.
- Classrooms supplied with materials to assist with curriculum implementation
- Data shared with teachers
  - Classroom observational data
  - Data on children’s status and development
Effectiveness Found Using Regression Discontinuity Design

- Compare children just beginning preschool as four year olds with scores of children entering kindergarten who attended the pre-k program.
- Control for gender, ethnicity, language and age
- Three separate comparisons:
  #1: graduates of year one with year 2 enrollees
  #2: graduates of year two with year 3 enrollees
  #3: graduates of year three with year 4 enrollees
What discontinuity looks like
Causal Evidence of Intervention Effects
(Wilson, Dickinson, & Rowe, Early Childhood Research Q., in press)

<table>
<thead>
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<tbody>
<tr>
<td><strong>Year One</strong></td>
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<td></td>
<td>0.77*</td>
<td>0.88*</td>
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<td><strong>Year Three</strong></td>
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<td>0.76*</td>
<td>0.76*</td>
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<td>Nat. Eng.</td>
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<td>1.01*</td>
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<td>1.01*</td>
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Classroom Learning Environment Measures
Literacy Environment Checklist

- **Book Area**: Book area is distinct

- **Book Selection**: Range of difficulty & genre

- **Book Use**: Books in varied areas and are used

- **Writing Materials**: Alphabet, word cards, writing tools and paper are available; distinct writing area

- **Writing Around the Room**: Dictations, big books, full-group literacy activities, writing displays, writing tools in dramatic play, puzzles with letters and words
Literacy Environment Checklist:

% of Total Points

<table>
<thead>
<tr>
<th>Category</th>
<th>Year 1</th>
<th>Year 2 - Visit 1</th>
<th>Year 2 - Visit 2</th>
<th>Year 3 - Visit 1</th>
<th>Year 3 - Visit 2</th>
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<tbody>
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<tr>
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ELLCO: Observation General Classroom Environment Subscale

- **Classroom Structure:**
  - Physical organization,
  - quality and display of learning materials,
  - management strategies, and
  - staff/child ratio
  - Emotional quality of staff/child interactions

- **Curriculum:**
  - Evidence of a cohesive curriculum
  - Opportunities for child choice and initiative,
  - Attention to diversity.
ELLCO: Language and Literacy Subscale

- **Language Environment**
  - Teacher/child conversations
  - Extended individual conversation
  - Efforts to build vocabulary
  - Attention to phonological awareness

- **Books & Book Reading:**
  - Book area: varied ability levels and content,
  - Promote learning,
  - Book reading activities,
  - Book reading links to instructional activities

- **Print & Early Writing:**
  - Materials and activities to develop writing
  - Teachers encourage child in meaningful ways,
  - Environmental print is present and used
ELLCO Language and Literacy Subscale

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2 - Visit 1</th>
<th>Year 2 - Visit 2</th>
<th>Year 3 - Visit 1</th>
<th>Year 3 - Visit 2</th>
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<td>Books &amp; Book</td>
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<td>Language &amp;</td>
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Fidelity to curriculum guidance at the setting level

- Book reading, small group etc.
- Varied number of points possible across settings

Construct level fidelity:

- Instructional activities designed to support distinct abilities: phonological awareness, print knowledge, language
- Summed features of instruction across the day related to a given construct
# Book Reading Fidelity Rating

1. Teacher reads and discusses book in a manner consistent with curriculum. □Y □N
   Indicate which READ: __________

2. Teacher holds book so that all children can see. □Y □N

3. Teacher defines and/or uses sophisticated vocabulary in ways that teach meanings. (for reads 3 and 4 include efforts to have children chime in with sophisticated words)
   □8+ □3-7 □0-2

4. Teacher reads book with expression and energy and uses some variety. This might include changes in pitch, volume, speed, and use of facial expressions and gestures. □Y □N

5. Teacher responds to children’s questions or to comments indicating confusion about the story, but does not get sidetracked by excessive talk. □Y □N

6. Teacher engages in thoughtful discussion after the story has been read. □Y □N

7. Teacher helps children understand characters’ feelings and motivations by explaining, discussing or with voice, gesture or expressions □ 4+ □2-3 □0-1

8. Teacher supports understanding of event sequences, pictures, cause-effect links □ 4+ □2-3 □0-1
## Fidelity of Implementation of OWL

<table>
<thead>
<tr>
<th>Activity</th>
<th>Y1</th>
<th>Y2: Spr</th>
<th>Y3: Spr</th>
<th>Poss. Pts</th>
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<tr>
<td>Morning Meeting</td>
<td>65</td>
<td>74</td>
<td>58</td>
<td>11</td>
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<tr>
<td>Writing: in Groups</td>
<td>52</td>
<td>97</td>
<td>92</td>
<td>9</td>
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<tr>
<td>Centers Time</td>
<td>76</td>
<td>92</td>
<td>81</td>
<td>24</td>
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<tr>
<td>Writing in Centers</td>
<td>60</td>
<td>71</td>
<td>72</td>
<td>18</td>
</tr>
<tr>
<td>Story Time</td>
<td>78</td>
<td>96</td>
<td>96</td>
<td>30</td>
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<tr>
<td>Songs, Word Play</td>
<td>77</td>
<td>92</td>
<td>88</td>
<td>19</td>
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<tr>
<td>Small Groups</td>
<td>45</td>
<td>77</td>
<td>71</td>
<td>42</td>
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<tr>
<td>Let’s Talk About It</td>
<td>53</td>
<td>68</td>
<td>86</td>
<td>12</td>
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<tr>
<td>Support for ELLs(^a)</td>
<td>75</td>
<td>92</td>
<td>82</td>
<td>4</td>
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<tr>
<td>Transitions</td>
<td>63</td>
<td>93</td>
<td>77</td>
<td>6</td>
</tr>
</tbody>
</table>

up to 59% | 60 – 75% | 76 – 89% | 90% and above
## Conceptual Grouping

<table>
<thead>
<tr>
<th><strong>Language</strong></th>
<th>Teachers use curriculum vocabulary in multiple activities throughout the day, talk about writing, read stories, and provide opportunities for children to use language.</th>
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</thead>
<tbody>
<tr>
<td><strong>Integrated Concepts</strong></td>
<td>Teachers make connections between activities throughout the day, providing full demonstrations and detailed explanations of activities, vocabulary, and other concepts; sustained interactions with children support children’s understanding of concepts, and encourage children to engage, participate and express ideas.</td>
</tr>
<tr>
<td><strong>Print &amp; Phonological Awareness</strong></td>
<td>Teachers engage in and draw attention to writing and print skills, encourage children to write in multiple centers/activities during the day, and engage in whole group activities focused on phonological awareness, writing, and print skills.</td>
</tr>
<tr>
<td><strong>Self-Regulation</strong></td>
<td>Teachers structure the day to encourage self-regulation by providing choices and having a structure for centers time, monitor students and manage attention; students have opportunities for hands-on activities.</td>
</tr>
</tbody>
</table>
Fidelity of Implementation

- Improvement after year one
- All three years generally strong in
  - Book reading
  - Centers
  - Support for ELLs
- Years two and three:
  - Strong to excellent fidelity in nearly all areas
Narrative Record:

1. How time was spent during the day
2. The level of children’s engagement (1-4)
3. Instructional level (1-4)
Narrative Record Data

School Day Organization
Fall 2011-2012
- Routines: 25%
- Whole Group: 24%
- Transitons: 12%
- Centers: 13%
- Seatwork: 4%
- Out of Room: 8%
- OWL Transitions: 9%

School Day Organization
Spring 2011-2012
- Routines: 28%
- Whole Group: 24%
- Transitons: 13%
- Centers: 9%
- Small Groups: 7%
- Seatwork: 3%
- Out of Room: 8%
- OWL Transitions: 8%
Narrative Record: Time in Curriculum-Based Activities

Percentage of School Day Using OWL Curriculum

- Spring Y1
- Fall Y2
- Spring Y2
- Fall Y3
- Spring Y3
- Fall Y4
- Spring Y4

- OWL
- Non-Owl Instruction
- Routines
- Transitions
- OWL Transitions
Average Child Involvement in Classroom Activities

Level of Classroom Involvement

Whole Group  Centers  Small Groups  Seatwork
Quality Improved and Was Excellent
<table>
<thead>
<tr>
<th>Measure</th>
<th>Language</th>
<th>Print</th>
<th>Phon. Awareness</th>
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<tr>
<td><strong>Literacy Envir. Checklist</strong></td>
<td>LEC Total Score</td>
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<tr>
<td><strong>ELLCO</strong></td>
<td>General Classroom Environment</td>
<td>•</td>
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<tr>
<td></td>
<td>Language &amp; Literacy Environment</td>
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<tr>
<td><strong>Fidelity Curriculum Components</strong></td>
<td>Morning Meeting</td>
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<td>Writing in Whole Group Settings</td>
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<td>Writing in Centers</td>
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<td>Centers</td>
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<td>Story Time</td>
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<td>SWPL</td>
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<td>Small Groups</td>
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<td></td>
<td>Let’s Find Out About It/Let’s Talk About It</td>
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<td>Fidelity Total</td>
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<td><strong>Fidelity Concepts</strong></td>
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<td>Proportion Instructional Time</td>
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<td></td>
<td>Proportion Non-OWL Instruction</td>
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<td>Proportion Whole Group</td>
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<td>Child Involvement (during instruction)</td>
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<td>Teacher Instruction (during all instructional time)</td>
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<td>OWL Small Group Proportion</td>
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<tr>
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<td>OWL Small Group Teacher Instruction</td>
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* p<.05; * p<.10
Concluding Thoughts

- Started with a project that had unusually strong pattern of effects on children. Provided opportunity to try to identify instructional processes that foster growth.
- High intercorrelations; similar vision of quality informed ELLCO and OWL.
- Narrative record provided distinct information. Helped predict language:
  - high quality instructional time & child engagement is important
  - small group instruction is especially important
Measures of Quality

Measures of quality:

- Similar vision of quality informed the curriculum and ELLCO. Strong implementation may have resulted in intercorrelations.
- Literacy environment: a distinct dimension
- Narrative record: added insight

Measures tied directly to instruction were helpful for coaching:

- Literacy environment
- Setting-specific curriculum delivery
Some direct 1-1 relationships between setting and outcomes were evident

- Book reading – language.
  - Strong implementation
  - About 15 minutes per day
- Writing in centers – print
  - weaker implementation)
  - Limited amount of time per child
- Small groups – print, phonological awareness
  - Generally good implementation; 5-7% of day
Measures that accumulate observations across settings are stronger predictors.

- ELLCO – language & phonological awareness
- Total fidelity – print & phonological awareness
- Conceptual groupings: all except procedural fidelity predicted phonological awareness and print

High quality delivery of curriculum with literacy focus results in learning of print-based skills.

Language requires child engagement as well.
Predicting Language

- Language predicted by
  - broad measure of quality: ELLCO
  - Book reading: setting most directly aligned with language teaching
  - Narrative record:
    - Instructional time
    - Child involvement in instructional time and small groups

- Language has been hard to improve.
  - We found: curriculum-driven intentional language-focused experiences
  - And child engagement

- Need to include children’s responses