Intervention Fidelity and Its Relationship to Child Outcomes in a Field-Test Study of the Center for Early Literacy Learning Practices

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**CELL Field Test Study**

- **Purpose:** Determine the degree of practitioner support needed in order to promote adoption and use of CELL early literacy practices by parents and practitioners.

- **Type and Location of Programs:** Part C, Part B(619), Early Head Start and Head Start programs in 5 States.

- **Comparative Conditions:** High intensity vs. low intensity of professional development and high fidelity vs. low fidelity of use of the CELL practices.

- **Participants:** Classroom practitioners, early intervention providers, parents of preschool-aged children served in center-based or home-based programs.
## Projected Sample Sizes for the Field Test Study

<table>
<thead>
<tr>
<th>Type of Program</th>
<th>Level of Intensity</th>
<th># of Children</th>
<th># of Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part C</td>
<td>High</td>
<td>10</td>
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<tr>
<td>Part C</td>
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<td>Part B</td>
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<tr>
<td>Part B</td>
<td>Low</td>
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<tr>
<td>Early Head Start (Classroom)</td>
<td>High</td>
<td>10</td>
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<tr>
<td>Early Head Start (Classroom)</td>
<td>Low</td>
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<tr>
<td>Early Head Start (Home)</td>
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<td>Early Head Start (Home)</td>
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<td>Head Start</td>
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<tr>
<td>Head Start</td>
<td>Low</td>
<td>10</td>
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Low and High Intensity Field-Based Groups

LOW Intensity

• Four hours of direct CELL training
• A monthly e-mail reminder of the key characteristics of one component of the CELL model

HIGH Intensity

• Four hours of direct CELL training
• A monthly e-mail reminder on the key characteristics of one component of the CELL model
• Four additional contacts with practitioners around CELL practices
Field Test Study Measures

- *Early Literacy Learning Practices Scale (Classroom Version)* or *Early Literacy Learning Practices Scale (Parent Version)*
  - Fidelity
  - Social validity
  - Child outcomes
- The Language Subscale of the *Developmental Observation Checklist System (DOCS)*
  - Child language outcomes
Administration Schedule

• The *Early Literacy Learning Practices Scale* and the *Developmental Observation Checklist System* language subscale are completed at the start of the field-test intervention, after 3 months of professional development, and at the completion of the intervention (6 months).

• Information on the *Early Literacy Learning Practices Scale* is used to assess intervention fidelity (quantity, quality, social validity)\(^a\) and relate variations in those measures to practitioner or parent judgments of children’s early literacy competence.

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\(^a\) Quantity measured at 1, 3, and 6 months, and quality and social validity measured at 3 and 6 months.
Early Literacy Learning Practices Scale

The Center for Early Literacy (CEL) is interested in knowing about the kinds of activities you do with the children you work with to help them learn the beginnings of talking, reading, and other early literacy skills. Please check all of the following things you have observed or otherwise:

- Have you helped the children develop their early literacy skills?
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Language Subscale of the Developmental Observation Checklist System
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## Types of CELL Fidelity-Related Measures

<table>
<thead>
<tr>
<th>Type</th>
<th>Construct</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quantity</strong></td>
<td>Use of the CELL practice guides</td>
<td>Length of use, number of practice guides, and frequency of use</td>
</tr>
<tr>
<td><strong>Quality</strong></td>
<td>Development-enhancing characteristics of the CELL activities</td>
<td>Interest-based, engagement, enjoyment, and persistence</td>
</tr>
<tr>
<td><strong>Social Validity</strong></td>
<td>Participants’ judgments of the CELL practices</td>
<td>Importance (practices and outcomes) and acceptability (practices and outcomes)</td>
</tr>
</tbody>
</table>
Early Literacy Learning Practices Scale

Quantity of the Use of the Intervention Practices

• How long have you been using CELL practices?
• How many different CELL practice guides have you used with the children you serve?
• How many days per week did you to use the CELL practices with the children you serve?
Early Literacy Learning Practices Scale
Quality of the Use of the Intervention Practices

• Children got excited while involved in the learning activities
• Children stuck with the learning activities a long time
• Children smiled or laughed a lot during the learning activities
• Children tried their hardest during the learning activities
Early Literacy Learning Practices Scale
Social Validity Indicators

• Using the CELL activities with the children was worth my time and effort

• I was easily able to fit the CELL activities into my daily schedule

• The purpose or goal of the CELL activities made sense to me

• The CELL activities are important for the children’s early literacy learning

• I would like to know more about other CELL activities I can do with the children I work with
Early Literacy Learning Practices Scale (Literacy-Related Outcome Indicators)

How often has your child done each of the following during the last month?

- Looked at books on his/her own
- Marked, scribbled, or drawn on his/her own
- Recognized signs, letters, or words
- Communicated or talked effectively with others
- Said or played with different sounds or words
Preliminary Findings

• The field test study to date has been completed with 22 practitioners and 15 parents in 8 programs. The practitioner data is used to illustrate how intervention fidelity was measured and related to the child outcomes.

• Information on the Early Literacy Learning Practices Scale was used to conduct preliminary analyses to: (1) evaluate changes in intervention fidelity across time and (2) relate variations in fidelity to variations in practitioners’ judgments of children’s early literacy-related abilities.
Changes in the Amount of Use of the CELL Practices

MONTHS OF INTERVENTION

PERCENT OF USE OF CELL PRACTICES

Low Use
High Use

1 3 6

0 0
Changes in the Quality of Use of the CELL Practices

PERCENT OF INDICATORS

MONTHS OF INTERVENTION

Low Quality
High Quality
Changes in the Social Validity Rating of the CELL Practices

![Bar Chart](chart.png)

- **PERCENT OF INDICATORS**
- **MONTHS OF INTERVENTION**
- **Low Validity**
- **High Validity**
Relationship Between Variations in Fidelity and Practitioners’ Judgments of the Children’s Early Literacy Abilities

NOTE. $d =$ Cohen’s $d$ effect size for the low vs. high fidelity comparisons.
Conclusions

• Results showed that an informal type of professional development was sufficient to obtain relatively high levels of intervention fidelity.

• Variations in fidelity were related to differences in children’s early literacy abilities as assessed by the practitioners. Future analyses will determine whether similar results are found in an independent assessment of children’s abilities using the children’s DOCS language scores.

• At the completion of the field-test study, additional analyses will be performed to identify the conditions under which professional development (e.g., high vs. low intensity) influences fidelity and how fidelity influences child outcomes.