Strengthening Family Capacity in Part C Early Intervention Programs

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Presentation made at the OSEP Leadership Conference,
Washington, DC, July 31, 2012
Purpose of the Presentation

- Propose an operational definition of family capacity-building intervention practices
- Describe four elements of family capacity-building and illustrate how they are related
- Illustrate the manner in which participatory experiences and opportunities are an important element of capacity-building practices
- Present findings from a study that promoted and enhanced parents’ capacity to provide their children interest-based everyday learning opportunities
- Summarize findings from meta-analyses of family-centered capacity-building studies showing the direct and indirect effects of participatory practices on parent, family, and child outcomes
Family capacity is described in the Final Regulations for the Early Intervention Program for Infants and Toddlers with Disabilities (34 CFR 303) as activities to determine if early intervention influences families knowledge of their rights, families can effectively communicate their needs, and families can assist their children to develop and learn. (emphasis is added)
Family Involvement in Early Intervention

Findings from studies of home visiting programs (including Part C early intervention programs) indicate:

- Parents are not generally engaged in learning to help their children develop and learn
- When parents are involved, practitioners often use ineffective and sometimes disempowering practices
- Many practitioners have not learned or are not aware of evidence-based capacity-building methods and strategies
Definition of Family Capacity-Building

Family capacity-building refers to the methods and procedures used by practitioners to create participatory parenting opportunities and experiences to strengthen existing parenting skills and promote the development of new parenting abilities in a manner that enhances and strengthens parenting self-efficacy beliefs.
Participatory Experiences and Opportunities

• Participatory parenting experiences and opportunities refer to situated (real-life) engagement in and use of parenting practices as part of everyday interactions with a child that are contexts for promoting and enhancing child competencies.

• A common finding across many different bodies of evidence examining capacity-building experiences and opportunities is the role *active learner participation* plays in strengthening competence and confidence.
Examples of the Role of Active Participation in Learning

• Contingency learning study of profoundly delayed children

• Personal responsibility study of elderly nursing home residents

• Movement study of neonatal felines

• Adult learning studies of knowledge and skill acquisition
Early Contingency Learning and Child Concomitant Social-Emotional Behavior

• Contingency learning games for promoting children’s acquisition of instrumental behavior

• Multiple-baseline design across participants study

• Measured increases in the children’s use of behavior to produce interesting consequences or reinforcing events

• Mapped social-emotional responding onto patterns of learning as indices and contingency awareness of mastery

<table>
<thead>
<tr>
<th>Child</th>
<th>Chronological Age (Months)</th>
<th>Developmental Age (Months)</th>
<th>Developmental Quotient</th>
<th>Diagnosis $^a$</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CP</td>
<td>VI</td>
</tr>
<tr>
<td>“Amy”</td>
<td>34</td>
<td>5</td>
<td>16</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>“Brenda”</td>
<td>48</td>
<td>4</td>
<td>9</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>“Cory”</td>
<td>52</td>
<td>3</td>
<td>6</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

$^a$ CP = Cerebral palsy, VI = Visual impairment
Child Social-Emotional Behavior

![Chart showing learning phases: Baseline, Acquisition, Mastery, and Maintenance.](chart.png)
Effects of Choice and Enhanced Responsibility for the Aged

- Responsibility-induced vs. dependency-induced interventions

- Random assignment of nursing home residents living on different floors to the two contrasting conditions

- Short and long-term outcomes of health and functioning:
  - Psychological well-being, perceived control, alertness, sociability, activity level, overall improvement in functioning
  - Nurses and physicians ratings of psychological and physical health, behavioral engagement, and mortality

Characteristics of the Interventions

The hospital administrator gave a talk to residents in the experimental group emphasizing their responsibility for themselves, whereas the communication to a second, comparison group stressed the staff’s responsibility for them as patients. To bolster the communication, residents in the experimental group were offered plants to care for, whereas residents in the comparison group were given plants that were watered by the staff. (Rodin & Langer, 1977, p. 897)

# Study Outcomes

<table>
<thead>
<tr>
<th>Dependent Measures</th>
<th>Findings Favored:</th>
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<tbody>
<tr>
<td></td>
<td>Responsibility-Induced Group</td>
</tr>
<tr>
<td><strong>Short-Term Outcomes</strong></td>
<td></td>
</tr>
<tr>
<td>Perceived control</td>
<td>ns</td>
</tr>
<tr>
<td>Well-being</td>
<td>✓</td>
</tr>
<tr>
<td>Activity level</td>
<td>✓</td>
</tr>
<tr>
<td>Alertness</td>
<td>✓</td>
</tr>
<tr>
<td>Sociability</td>
<td>✓</td>
</tr>
<tr>
<td>Overall improvement</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Long-Term Outcomes</strong></td>
<td></td>
</tr>
<tr>
<td>Well-being</td>
<td>ns</td>
</tr>
<tr>
<td>Engagement</td>
<td>✓</td>
</tr>
<tr>
<td>Sociability</td>
<td>✓</td>
</tr>
<tr>
<td>Self-initiating behavior</td>
<td>✓</td>
</tr>
<tr>
<td>Mortality</td>
<td>✓</td>
</tr>
</tbody>
</table>
Movement-Produced Stimulation in the Development of Visually Guided Behavior

- Active production vs. passive recipient of movement-induced stimulation
- Random assignment of kitten litter mates to the two contrasting conditions
- Outcomes included coordinated paw placements and discrimination

Contrasting Movement-Produced Stimulation Conditions
Study Results

• The active participant kittens all demonstrated visually-guided paw placement after exposure to the apparatus whereas none of the passive participant kittens demonstrated the same behavior.

• The active participant kittens all demonstrated the ability to discriminate shallow from deep cliffs whereas none of the passive participant kittens demonstrated the same ability.
Research Synthesis of Adult Learning Studies

- Research synthesis of studies of accelerated learning, coaching, guided design, and just-in-time training
- 58 randomized control design studies
- 2,095 experimental group participants and 2,213 control or comparison group participants
- Combination of studies in university and non-university settings
- Learner outcomes included changes or improvements in knowledge, skills, attitudes, and self-efficacy beliefs
- The influence of the adult learning methods on the learner outcomes was estimated by weighted Cohen’s $d$ effect sizes for the differences on the post test scores for the intervention vs. nonintervention group participants

### Characteristics Used to Code and Evaluate the Implementation Studies

#### Planning
- **Introduce**: Engage the learner in a preview of the material, knowledge or practice that is the focus of instruction or training
- **Illustrate**: Demonstrate or illustrate the use or applicability of the material, knowledge or practice for the learner

#### Application
- **Practice**: Engage the learner in the use of the material, knowledge or practice
- **Evaluate**: Engage the learner in a process of evaluating the consequence or outcome of the application of the material, knowledge or practice

#### Deep Understanding
- **Reflection**: Engage the learner in self-assessment of his or her acquisition of knowledge and skills as a basis for identifying “next steps” in the learning process
- **Mastery**: Engage the learner in a process of assessing his or her experience in the context of some conceptual or practical model or framework, or some external set of performance standards or criteria

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## Most Effective Assistive Technology Training Methods

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Practice</th>
<th>Mean Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction</strong>&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Out of class activities/self-instruction</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td>Classroom/workshop presentations</td>
<td>0.63</td>
</tr>
<tr>
<td></td>
<td>Pre-class learner exercises</td>
<td>0.54</td>
</tr>
<tr>
<td><strong>Illustration</strong>&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Instructor role playing/simulations</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>Learner informed input</td>
<td>0.53</td>
</tr>
<tr>
<td><strong>Practicing</strong>&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Real life learner application</td>
<td>0.94</td>
</tr>
<tr>
<td></td>
<td>Real life learner application/role playing</td>
<td>0.86</td>
</tr>
<tr>
<td><strong>Evaluation</strong>&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Self assessment of strengths/weaknesses</td>
<td>0.94</td>
</tr>
<tr>
<td><strong>Reflection</strong>&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Identify performance improvement goals</td>
<td>1.27</td>
</tr>
<tr>
<td></td>
<td>Journaling/behavior suggestions</td>
<td>0.82</td>
</tr>
<tr>
<td><strong>Mastery</strong>&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Standards-based assessment</td>
<td>0.86</td>
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</tbody>
</table>

<sup>a</sup>Instructor practices.  <sup>b</sup>Learner practices.  <sup>c</sup>Learner-instructor practices.
Differential Effectiveness of Active Adult Learning

![Bar chart showing the average Cohen's d effect size for different types of adult learning practices.](chart)

- **Introduce/Illustrate**: 0.50
- **Practice/Evaluate**: 0.90
- **Reflection/Mastery**: 1.00

**Type of Adult Learning Practice**

- Introduce/Illustrate
- Practice/Evaluate
- Reflection/Mastery
Cumulative Effects of Different Combinations of the Most Effective Adult Learning Method Practices
Model of Family Capacity-Building
Four Elements of Capacity-Building

• Capacity-building as a model or paradigm for structuring how early childhood practitioners work with families
• Capacity-building as a set of help giver practices that engage parents in participatory experiences and opportunities that build and strengthen parent and family capacity
• Capacity-building as parenting knowledge and skills for carrying-out parenting responsibilities and promoting child learning
• Capacity-building as a sense of parenting competence and confidence
Relationship Between the Four Elements of the Capacity-Building Model

- Capacity Building Paradigm
  - Capacity Building Help Giving Practice
  - Participatory Parenting Experiences and Opportunities
    - Building and Strengthening Parenting Knowledge and Skills
      - Strengthening a Sense of Parenting Confidence and Competence
## Contrasting Approach to Early Intervention

<table>
<thead>
<tr>
<th>Capacity Building Models</th>
<th>Traditional Models</th>
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<tbody>
<tr>
<td>Promotion vs. Treatment</td>
<td></td>
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<tr>
<td>Empowerment vs. Expertise</td>
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<tr>
<td>Strengths-Based vs. Deficit-Based</td>
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<tr>
<td>Resource-Based vs. Service-Based</td>
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<tr>
<td>Family-Centered vs. Professional Centered</td>
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## Parenting Capacity-Building Paradigm

<table>
<thead>
<tr>
<th>Models</th>
<th>Main Focus</th>
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</thead>
<tbody>
<tr>
<td>Promotion</td>
<td>Enhance and promote parenting knowledge and skills</td>
</tr>
<tr>
<td>Empowerment</td>
<td>Create opportunities that support and strengthen a sense of parenting confidence and competence</td>
</tr>
<tr>
<td>Strengths-Based</td>
<td>Build on existing parenting capabilities as the basis for promoting new parenting skills</td>
</tr>
<tr>
<td>Resource-Based</td>
<td>Use a range of resources and supports for enhancing parenting capabilities</td>
</tr>
<tr>
<td>Family-Centered</td>
<td>Engage parents in participatory experiences and opportunities to strengthen and promote parenting knowledge, skills, and self-efficacy beliefs</td>
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Capacity-Building Parenting Opportunities

Parenting experiences and opportunities that actively involve parents in everyday, real life parenting activities are more likely to have capacity-building characteristics and consequences. These include, but are not limited to, a parent providing his or her child everyday learning opportunities to promote child development and using naturalistic teaching strategies and responsive parenting interactional styles to encourage and support child learning.
Building and Strengthening Parenting Confidence and Competence

The experiences afforded parents to strengthen existing and build new parenting capacity must also influence or change a parents’ sense of confidence and competence if the parent is to sustain engagement in parenting behavior

• A sense of competence refers to the (self-efficacy) belief that one’s behavior will have the expected effect or outcome

• A sense of confidence refers to the (self-efficacy) belief that one has the capacity to perform a task competently
Contrasting Consequences of Different Parenting Experiences

Parenting Experiences

Parenting Behavior Has Expected Effects
- Strengthens a Sense of Competence
- Strengthens a Sense of Confidence

Parenting Behavior Does Not Have Expected Effects
- Weakens a Sense of Competence
- Weakens a Sense of Confidence

Model for Showing the Relationship Between Capacity-Building Help Giving Practices and Capacity-Building Parenting Experiences and Outcomes

- Capacity-Building Help Giving Practices
- Parenting Knowledge and Skills
- Parenting Self-Efficacy Beliefs
- Competence
- Confidence
Caregiver Confidence and Competence Associated With the Use of Caregiver-Mediated Intervention Practices

Purpose: Determine the extent to which the use of caregiver-mediated everyday child learning was associated with improvements in caregiver skills, competence, and confidence

Study Participants: Three mothers and one grandmother of preschool aged children with disabilities or developmental delays

Outcomes: Measures of parenting behavior (skills) and parenting self-efficacy beliefs (confidence and competence)

Methodology: Multiple baseline design across study participants

Caregiver-Mediated Early Intervention Practices

• Participants identified the children’s interests, the everyday activities that were sources of interest-based learning opportunities, and the responsive caregiver behavior that was used to engage and sustain child engagement in interest-based everyday child learning.

• Study participants used child interest-based everyday activities as sources of child learning opportunities where the participants supported and encouraged child learning in the activities using responsive teaching procedures.

• An early childhood practitioner used participatory parenting experiences and opportunities to support and encourage the caregivers’ use of the natural environment practices.
Adoption and use of everyday activities as sources of interest-based child learning opportunities strengthened and promoted parents' skills in using the natural learning environment practices.

(Note. ES = Estimated Cohen's $d$ effect size)
Findings also showed that promoting caregivers’ use of everyday activities as sources of interest-based child learning opportunities had the effect of strengthening parenting competence and confidence.

(Note. ES = Estimated Cohen’s d effect size)
Changes in both parenting skills and parenting confidence and competence mapped onto one another in a manner consistent with the family capacity-building model

(Note. r = Correlation between the two parenting measures)
Capacity-Building Family-Centered Practices

• The characteristics and consequences of capacity-building family centered practices have been a focus of my research and practice for more than 25 years.

• This research and practice has helped identify the conditions under which participatory parenting and family experiences and opportunities are most likely to have competency-enhancing effects.

• The overall pattern of results show that family-centered help giving practices influence parent, family, and child outcomes mediated by self-efficacy beliefs.
Types of Capacity-Building Family-Centered Practices

Research conducted by myself and my colleagues has consistently found that there are two clearly discernable subsets of family-centered practices that “fall into” distinct categories of practice:

• Relational Practices
• Participatory Practices
Relational Practices

Relational practices include behaviors typically associated with effective help giving (active listening, compassion, empathy, etc.) and positive staff attributions about program participant capabilities

• These kinds of practices are typically described in terms of behaviors that strengthen program participant and practitioner interpersonal relationships (mutual trust, collaboration, etc.)

• Relational practices also include help giver beliefs about existing family member strengths and their capacity to become more competent as well as practitioner respect for personal and cultural beliefs and values
Participatory Practices

Participatory practices include behaviors that involve program participant choice and decision making, and which meaningfully involve participants in actively procuring or obtaining desired resources or supports for achieving desired life goals.

- These kinds of practices strengthen existing competencies and provide opportunities for learning new capabilities by engaging family members in informed decision making and acting on their choices.

- Participatory practices also include help giver responsiveness to a family’s situation and changing life circumstances, and help giver flexibility to these situations and circumstances.
Meta-Analysis of Family-Centered Help-giving Practices Research

*Family-Centered Practices*

Relational and participatory family-centered practices measured by 12 different family-centered practices scales

*Studies*

47 studies conducted in 7 countries (N=11,187 study participants)

*Outcomes*

Program helpfulness, self-efficacy beliefs, social support, child behavior functioning, parent and family well-being, and parenting competence and confidence

*Measure of Effect Size*

Correlation coefficient for the relationship between relational and participatory practices and the study outcomes. The average weighted correlations for all studies combined were used as the best estimate of the size of effect between measures

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Relationships Among Family-Centered Help Giving Practices, Self-Efficacy Beliefs and Program Participant Outcomes
Direct Effects of Family-Centered Practices on Parent, Family, and Child Behavior and Functioning

**Outcome Measures**

- Program Helpfulness
- Self-Efficacy Beliefs
- Social Support
- Child Behavior
- Parent/Family Well Being
- Parenting Capabilities

**Mean Effect Size (r)**
Direct Effects of Self-Efficacy Beliefs on Parent, Family, and Child Behavior and Functioning

**Outcomes Measures**

- Program Helpfulness
- Parenting Capabilities
- Child Behavior
- Social Supports
- Parent/Family Well-Being

**Mean Effect Size (r)**

0.8
0.6
0.4
0.2
0

- Program Helpfulness: 0.8
- Parenting Capabilities: 0.6
- Child Behavior: 0.5
- Social Supports: 0.4
- Parent/Family Well-Being: 0.2
Direct and Indirect Effects of Family-Centered Practices on the Study Outcomes

**Outcome Domains**
- Program Helpfulness
- Parenting Capabilities
- Child Behavior
- Parent/Family Well-Being

**Mean Effect Size (r)**

- **Direct Effects**
- **Indirect Effects**
Model for Evaluating the Direct and Indirect Effect of Capacity-Building Help Giving Practices on Parenting Behavior

NOTE. Straight lines are direct effects, curved line is indirect effect.
Total Effects (Direct + Indirect) of Family-Centered Practices on the Study Outcomes

OUTCOME DOMAINS

- Program Helpfulness
- Child Behavior
- Parenting Capabilities
- Parent/Family Well-Being

MEAN EFFECT SIZE (r)

0 0.2 0.4 0.6 0.8 1 1.2
Structural Equation Modeling Study
Meta-Analytic Structural Equation Modeling of the Influences of Family-Centered Care on Parent and Child Psychological Health

Studies
15 investigations of family-centered care that included measures of family-centered practices, self-efficacy beliefs, parent psychological health, and child psychological health

Sample
N= 2948 parents and other caregivers

Family-Centre Care Measures
Help-Giving Practices Scale, Family-Centered Practices Scale, and Enabling Practices Scale

Hypothesis
Based on contentions in the family-centered care literature, family-centered practices were expected to directly affect parent psychological health and parent health and in turn affect child psychological health. Based on our own research, the relationships between family-centered care and parent and child health were expected to be mediated by self-efficacy beliefs.

Structural Equation Model for Evaluating the Effects of Family-Centered Care, Self-Efficacy Beliefs, and Child Special Health Care Needs on Parent and Child Psychological Health
Meta-Analytic Structural Equation Modelling Results

Fit Indices
RMSEA = .04
CFI = 1.00

*p < .01, **p < .001, ***p < .0001.
Conclusions

• The ways in which early childhood practitioners work and interact with families matters if those interactions will have capacity-building characteristics and consequences.

• Experiences and opportunities that strengthen both parenting knowledge and skills, and promote a positive sense of parenting competence and confidence, are more likely to have capacity-building consequences.

• Findings from the study that specifically focused on the use of capacity-building practices to promote parents’ use of interest-based child learning opportunities yielded results consistent with the family capacity-building model.

• Results from meta-analyses of family-centered help giving practices provide additional support for the key elements of the capacity-building model.
PowerPoint presentation available at

www.puckett.org

The development of the capacity-building approach described in this PowerPoint was supported, in part, by funding from the US Department of Education, Office of Special Education Programs