What is PICCOLO? An Overview of an Observational Measure of Developmental Parenting

Lori A. Roggman

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What is PICCOLO?
Parenting Interactions with Children: Checklist of Observations Linked to Outcomes

PICCOLO is observational measure of positive parenting interactions with very young children that is:

• Easy to use
• Practical
• Reliable
• Valid

What does PICCOLO measure?

We identified 4 important kinds of “developmental parenting” behaviors from the research literature:

• Affection
• Responsiveness  
• Encouragement
• Teaching

These kinds of parenting behaviors predict better child development outcomes.

What does PICCOLO look like?

A list of observable parenting behaviors, with a rating scale from 1 to 3 for each behavior.

The behaviors predict positive child outcomes:

• Cognitive development
• Vocabulary
• Behavior
What do practitioners say about PICCOLO?

"I saw things I didn’t see before."

"It’s easy to learn & really user friendly!"

"It’s cutting edge in the 0-3 range."

"It works for me and my families."

"It’s a good tool for parents to understand their importance."

"It makes it easier to make lesson plans & help parents."

"It works in my community."

"It gives me a starting point for what to do with parents."

Why use PICCOLO?

• to assess parenting skills
• to guide parenting interventions
• to track program outcomes

How was PICCOLO developed?

• Used data & video archive mostly from national Early Head Start Research & Evaluation Project
• Collected new data from 4,500+ clips of 2,000+ families
• Selected best 29 items from 100+ items

Each domain has a list of 7-8 behaviors.

For example:

<table>
<thead>
<tr>
<th>Domain 1: Affection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent. . .</td>
</tr>
<tr>
<td>1. speaks in a warm tone of voice</td>
</tr>
<tr>
<td>2. smiles at child</td>
</tr>
<tr>
<td>. . .</td>
</tr>
</tbody>
</table>
Each item has coding guidelines

<table>
<thead>
<tr>
<th>Parent...</th>
<th>Observation Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. speaks in a warm tone of voice</td>
<td>Parent’s voice is positive in tone and may show enthusiasm or tenderness. A parent who talks little but speaks warmly should be coded highly.</td>
</tr>
<tr>
<td>2. smiles at child</td>
<td>Parent directs smiles toward child, although parent and child do not necessarily need to be looking at each other when smile occurs. Includes small smiles.</td>
</tr>
</tbody>
</table>

Each item is scored as 0, 1, or 2

<table>
<thead>
<tr>
<th>None</th>
<th>Some</th>
<th>Lots</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Scoring

0 – “None” - Absent; didn’t see, not observed.
1 – “Some” - Barely there; seen sometimes.
2 – “Lots” - Consistently there; seen often.

PICCOLO is . . .

- **Positive**: PICCOLO items describe positive parenting.

- **Practical**: PICCOLO helps practitioners identify parenting strengths to encourage parents to do more.

- **Culturally Relevant**: PICCOLO was developed from videotaped parenting interactions of
  - European-Americans
  - Latino-Americans
  - African-Americans

PICCOLO is . . .

- **Reliable**: Independent observers rate PICCOLO items similarly,
  - over 70% agreement across all ethnic groups
  - 2 of 3 observers agree over 90% of the time
  - inter-rater reliability, $r = .85$

and PICCOLO domain items “hang together”

- alpha > .70 across domains & ethnic groups
- single factor structure within each domain
PICCOLO is . . .

- **Valid**: PICCOLO has good content, construct, and predictive validity.
- **Content validity**: practitioners’ importance ratings
- **Construct validity**: correlations with similar measures
- **Predictive validity**: correlations with child outcomes

**Content Validity**
Practitioners rated each PICCOLO item on 0-3 scale
0 = not at all important
1 = somewhat important
2 = fairly important
3 = very important
Selected items averaged 2.6, eliminated items 2.3.

Average importance
- Affection 2.7
- Responsiveness 2.6
- Encouragement 2.6
- Teaching 2.4

**Construct Validity**
In all age (14m, 24m, 36m) & ethnic groups, similar measures are correlated with PICCOLO domains:
- **Affection** with positive regard, \( r > .50 \)
- **Responsiveness** with sensitivity, \( r > .39 \)
- **Teaching/Talking** with cognitive stimulation, \( r > .50 \)
- **Encouragement** with supportiveness*, \( r > .50 \)

**Predictive Validity**
PICCOLO correlates with the following outcomes, at various times, for all ethnic groups:
- **Cognitive development**
- **Vocabulary**
- **Behavior**
Domain 1: Affection

Definition: Warmth, physical closeness, and positive expressions toward child.

Affection is related to:
- less antisocial behavior
- better adjustment
- more compliance
- greater cognitive ability
- more school readiness


Affection items

<table>
<thead>
<tr>
<th>Parent . . .</th>
<th>1. speaks in a warm tone of voice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. smiles at child</td>
</tr>
<tr>
<td></td>
<td>3. praises child</td>
</tr>
<tr>
<td></td>
<td>4. is physically close to child</td>
</tr>
<tr>
<td></td>
<td>5. uses positive expressions with child</td>
</tr>
<tr>
<td></td>
<td>6. is engaged in interacting with child</td>
</tr>
<tr>
<td></td>
<td>7. shows emotional support toward child</td>
</tr>
</tbody>
</table>

Domain 2: Responsiveness

Definition: Responding to child’s cues, emotions, words, interests, and behaviors.
Responsiveness is related to

- more secure attachment
- better cognitive & social development
- better language development
- fewer behavior problems
- better emotion regulation & empathy


Responsiveness items

<table>
<thead>
<tr>
<th>Parent...</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. pays attention to what child is doing</td>
</tr>
<tr>
<td>2. changes pace or activity to meet child’s interests or needs</td>
</tr>
<tr>
<td>3. is flexible about child’s change of activities or interests</td>
</tr>
<tr>
<td>4. follows what child is trying to do</td>
</tr>
<tr>
<td>5. responds to child’s emotions</td>
</tr>
<tr>
<td>6. looks at child when child talks or makes sounds</td>
</tr>
<tr>
<td>7. replies to child’s words or sounds</td>
</tr>
</tbody>
</table>

Domain 3: Encouragement

Definition: Active support of child’s exploration, effort, skills, initiative, curiosity, creativity, and play.

Encouragement is related to

- less negativity
- willingness to try challenging tasks
- better cognitive & social development
- better language development

Encouragement items

<table>
<thead>
<tr>
<th>Parent</th>
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<tbody>
<tr>
<td>1. waits for child’s response after making a suggestion</td>
</tr>
<tr>
<td>2. encourages child to handle toys</td>
</tr>
<tr>
<td>3. supports child’s choices or activity changes</td>
</tr>
<tr>
<td>4. supports child in doing things on his/her own</td>
</tr>
<tr>
<td>5. verbally encourages child’s efforts</td>
</tr>
<tr>
<td>6. offers suggestions to help child</td>
</tr>
<tr>
<td>7. shows enthusiasm about what child is doing</td>
</tr>
</tbody>
</table>

Domain 4: Teaching

**Definition:** Shared conversation and play, cognitive stimulation, explanations, and questions.

Teaching is related to
- better cognitive & social development
- better language development
- more conversation
- more emergent literacy skills


Teaching items

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1. explains reasons for something to child</td>
</tr>
<tr>
<td>2. suggests activities to extend what child is doing</td>
</tr>
<tr>
<td>3. repeats or expands child’s words or sounds</td>
</tr>
<tr>
<td>4. labels objects or actions for child</td>
</tr>
<tr>
<td>5. engages in pretend play with child</td>
</tr>
<tr>
<td>6. does activities in a sequence of steps</td>
</tr>
<tr>
<td>7. talks to child about characteristics of objects</td>
</tr>
<tr>
<td>8. asks child for information</td>
</tr>
</tbody>
</table>
HOW TO USE PICCOLO WITH FAMILIES

How do I select PICCOLO observation activities?

Select activities that . . .

- fit program goals
- can be done in limited space
- engage both parent and child
- last at least 10 minutes

Activities for PICCOLO observations

- Picture books (*Hungry Caterpillar*, *Good Night Moon*, etc.)
- Puzzles, blocks, play-dough, art materials
- Pretend play toys
- Family routines
- Planned home visit activities

Tips for doing PICCOLO Observations with Families

- Tell parents you’ll do observations regularly.
- Be flexible--re-schedule if needed.
- Offer choices of activities.
- Do the observation where the family is comfortable.
- If video recording, offer a copy of the video.
When you use PICCOLO with parents be. . .

**Positive:** Emphasize what parents do well and often.

**Practical:** Ask when parents can do more PICCOLO behaviors as part of regular activities.

**Culturally Sensitive:** Ask parents what kinds of parenting interactions are important to them.

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**How to use PICCOLO to plan intervention**

1. Look for highest PICCOLO domain & item scores.
2. Ask what daily activities involve those behaviors.
3. Plan with parent to do that activity on a home visit.
4. During activity, ask about related parenting behaviors in that and other domains.

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**When to do PICCOLO Ratings**

- “Live” *
- Immediately after home visit--while memorable
- Later while watching video (most common)
  - alone--identify strengths to support
  - with parent--evidence-based intervention
  - with supervisor--for reflection and planning

**Video-recording Guidelines**

- Set up in a quiet place.
- Both parent and child in viewfinder.
- Faces, hands, materials in viewfinder.
- Don’t face a light or sunny window!
- Check viewfinder
- Record for 10 minutes.
- Check viewfinder
Strategies that work with PICCOLO

- Focus on child development
- Engage parent & child together
- Observe & comment on PICCOLO behaviors
- Plan activities together
- Involve the family in activities
- Use family activities & routines
- Be responsive, flexible, & supportive

Support materials available for PICCOLO

Thanks!

We are grateful to the parents and children in the video clips used to develop the PICCOLO measure. Many of them were in the Early Head Start research project. We are also grateful to the Early Head Start Research Consortium and the Head Start Bureau for making those video clips available for research and to the Administration for Children Youth & Families for making the PICCOLO project possible through Grant #90YF0050.