EMBEDDED LEARNING OPPORTUNITIES FOR INFANT/TODDLER CLASSROOMS

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Agenda
- Learning Objectives
- Definition of and Process for Embedded Instruction
- Activity: Learning Activity Matrix
- Incidental Teaching Strategies
- Positive Reinforcement
- Activity: ELO At-A-Glance
- Major Messages
Learning Objectives

- Participants will define and learn the steps to implement embedded instruction: what, when, how, and how to monitor child’s progress.
- Participants will learn that embedded instruction occurs throughout daily routines and across environments (when).
- Participants will learn about various methods for teaching and reinforcing new skills (how).

Intentional Planning for Embedded Learning Opportunities

- [Diagram with Building Blocks and LEAP]
- LEAP and other evidence-based practices.

Infants and Toddlers....

- Learn what people expect of them and what they can expect of other people through early experiences with parents and other caregivers.

(Boyle & Parlakian, 2004)
Embedded Instruction…

- Is an evidence based practice that emphasizes identifying naturally occurring times and activities to implement instructional procedures for teaching learning targets (and providing experiences) across various settings that...
  - increases engagement, participation, and independence
  - is effective for teaching new skills to all children
  - promotes generalization and maintenance of newly learned skills in ongoing activities, routines and transitions

Why Use Embedded Instruction?

- Maximizes motivation by considering child preferences
- Provides opportunities to learn and practice skills in meaningful, real life contexts
- Promotes Skill Learning
  - Acquisition (learn a new skill)
  - Fluency (how well and often a child uses the new skill)
- Promotes Skill Mastery
  - Maintenance
  - Generalization

Process for Embedding Instruction

- What we teach?
  - Functional, meaningful and measurable learning targets
- When we teach?
  - On-going activities, routines and transitions
- How we teach?
  - Instructional procedures that promote engagement, learning and mastery
- How to monitor progress?
  - Evaluating child and adult outcomes
What we teach?

Planning:
Team develops functional goals and outcomes.

[http://www.cpeip.fsu.edu/earlysteps/testtoolkit/test/outcomes-connected-to-activities-routines.html]

Supporting Mobile Infants and Toddlers to be Independent with Daily Routines

<table>
<thead>
<tr>
<th>8 – 18 months</th>
<th>18 – 36 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Drink from a cup, eat finger food and begin to use a spoon</td>
<td></td>
</tr>
<tr>
<td>• Help undress and dress</td>
<td></td>
</tr>
<tr>
<td>• Point to body parts</td>
<td></td>
</tr>
<tr>
<td>• Have strong feelings and begin saying &quot;no&quot;</td>
<td></td>
</tr>
<tr>
<td>• Reach for / point to choices</td>
<td></td>
</tr>
<tr>
<td>• Feel a sense of security with routines and expectations</td>
<td></td>
</tr>
<tr>
<td>• Imitate sounds and movement</td>
<td></td>
</tr>
<tr>
<td>• Understand more than they can say</td>
<td></td>
</tr>
<tr>
<td>• Wash hands with help</td>
<td></td>
</tr>
<tr>
<td>• Drink from a straw</td>
<td></td>
</tr>
<tr>
<td>• Put clothes in the hamper when asked</td>
<td></td>
</tr>
<tr>
<td>• Feed self with spoon</td>
<td></td>
</tr>
<tr>
<td>• Push and pull toys, fill and dump</td>
<td></td>
</tr>
<tr>
<td>• Learn to use the toilet</td>
<td></td>
</tr>
<tr>
<td>• Bend over without falling</td>
<td></td>
</tr>
<tr>
<td>• Imitate simple actions</td>
<td></td>
</tr>
<tr>
<td>• Enjoy trying to do tasks on their own</td>
<td></td>
</tr>
</tbody>
</table>

Function Goal Examples

Infant
Tommy will participate in eating, playing, and going for a walk by holding his head upright and looking at people and things in his immediate environment when a caregiver calls his name or shows him something to look at. We will know he can do this when he holds his head up for 3 minutes during 2 routines in a day.

Toddler
Francisco will participate in meals, play time, and music by pointing to the item he wants to eat or drink, play with, or sing about when he is given 2 choices. We will know he can do this when he points to his choice 1 time during each of these activities each day for 4 days in one week.
**When to teach?**

**Planning:**
Team decides when to embed instruction.
*Across Environments and Throughout the Day*

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**Activity Matrix**

- Intentional planning of materials needed in daily activities to teach and practice learning targets
- Use one Activity Matrix for individual or multiple children
- Be creative in making the Activity Matrix functional for those using them
- Assist parents in developing an 'at home' Activity Matrix

([link](http://eclkc.ohs.acf.hhs.gov/hslc/tta-system/teaching/practice/docs/activity-matrix-la.pdf))

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**Activity Matrix Individual Child Example**

<table>
<thead>
<tr>
<th>18 Mo. - 2 Yr. Schedule</th>
<th>Seeks Attention</th>
<th>Gives Toy to Peer (Share)</th>
<th>Putting Binky Away</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrival/Mini Snack</td>
<td>goes to preferred caregiver</td>
<td>puts binky in cubby</td>
<td></td>
</tr>
<tr>
<td>Table Time</td>
<td>offers material</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morning Circle</td>
<td>makes eye contact</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centers</td>
<td>offers material</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lunch</td>
<td>holds lunch bag to be opened</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nap</td>
<td>gets binky from cubby; returns it after nap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outside/Centers</td>
<td>goes to preferred peer</td>
<td>offers material</td>
<td></td>
</tr>
<tr>
<td>Closing Circle</td>
<td>makes eye contact</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Activity Matrix Multiple Children Example

<table>
<thead>
<tr>
<th>Activity</th>
<th>Jose Luis – 7 months</th>
<th>Sara – 13 months</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arrived</strong></td>
<td>Mom gives self-regulation item to teacher while holding baby</td>
<td>Responds to teacher with eye contact and verbalization when welcomed</td>
</tr>
<tr>
<td><strong>Play Time</strong></td>
<td>Places desired toy just out of reach but in site</td>
<td>Requests specific desired toys, verbal extensions</td>
</tr>
<tr>
<td><strong>Diaper Change</strong></td>
<td>Places desired toy just out of reach but in site</td>
<td>Transitions with star</td>
</tr>
<tr>
<td><strong>Food</strong></td>
<td></td>
<td>Aks for more</td>
</tr>
<tr>
<td><strong>Nap</strong></td>
<td>Teacher lays baby down while holding self-regulation item, verbal prompt</td>
<td>Request naptime self-regulation item</td>
</tr>
<tr>
<td><strong>Diaper Change</strong></td>
<td>Places desired toy just out of reach but in site</td>
<td>Transitions with star</td>
</tr>
<tr>
<td><strong>Departure</strong></td>
<td>Teacher gives self-regulation item to Mom while holding baby</td>
<td>Waves goodbye and blows kiss</td>
</tr>
</tbody>
</table>

### Video

- Toddler Transition (Diapering).mpg
Benefits of Embedded Instructions Throughout Daily Routines

- Family has more opportunities throughout the day to encourage their child to practice and learn new skills.
- Child is also more likely to achieve desired outcomes developed in partnership between the family and the rest of the early intervention team.
- Family can maintain typical lives while supporting the development of their child.

Video Examples

CONNECT VIDEO 1.3: Routine at Home
CONNECT VIDEO 1.4: Routine at Home
CONNECT VIDEO 1.7: Routine in a Program

[http://community.fpg.unc.edu/connect-modules/resources/videos]

How to teach?

Implementing:
Team decides on supports and materials needed to teach the child, as well as reinforcement schedule.
Incidental Teaching

Incidental teaching involves providing instruction within ongoing typical activities based on the child’s interest and motivation (McGee, Daly, and Jacobs, 1994)

- Promotes initiation and generalization
- Allows child opportunity to initiate interaction and respond spontaneously
- Built-in reinforcers
- Measurable
- Planned – different than a “teachable moment”

Incidental Teaching Strategies

- One way of setting up incidental teaching opportunities for older infants and toddlers is to contrive situations that do not already occur in the natural environment
  - Forgetfulness
  - Visible But Unreachable
  - Violation of Expectations
  - Sabotage

Positive Reinforcement

- A positive reinforcer is any pleasant object, action or gesture that is given to a person following a behavior and results in increasing the frequency of that behavior, a reward
  - Social Reinforcers: praise, smile, hug, high 5…
  - Tangible/Material Reinforcers: desired items, food…
  - Activity Reinforcers: special activities or privileges…
When to Reinforce?

- Reinforce immediately after the desired behavior
- Reinforce every time the desired behavior occurs
- Gradually fade the reinforcer
- Reinforce occasionally to strengthen and maintain the target behavior (new skill taught to the child)

Embedded Learning Opportunities

- Teachers create short teaching episodes within ongoing classroom activities and routines
- Teaching episodes focus on a child’s individual learning objective

(http://depts.washington.edu/hacenter/elo/elo)

Activity

Create a ELO-At-A-Glance
How to monitor progress?

Evaluating:
Team collect data to be sure that the child is learning the new skill. If there is no progress or regression in skill team reevaluates the instructional plan and creates a new one.

Some Data Collection Options

- Behavior Rating Scale
- Scatter Plot
- Levels of Assistance (prompting hierarchy)

Major Messages

- It is essential that the child and caregiver are engaged in the embedded learning opportunities, which should be offered throughout the day across all environments
- Appropriate instructional strategies, supports, and positive reinforcement should be available for all children or families to increase the rate of success in achieving learning targets
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