Infants and Toddlers Make Meaning

A Reflective Approach to Teaching & Learning with Infants & Toddlers
Mary Jane Maguire-Fong

Our Journey Today

• A glimpse at what scientists are learning about how infants and toddlers learn.
• A proposal for how to build on this evidence from science as we teach and learn with infants and toddlers.
• Examples of a reflective approach to infant curriculum.

Truth or Myth?

Infants are not yet aware of and conscious of what occurs around them.

Infants are highly aware of and conscious of what occurs around them.

BABIES ARE HIGHLY AWARE OF ALL THAT OCCURS AROUND THEM.

Reflection

• What did you notice?
• How did he reveal to you his thinking?

http://www.alisongopnik.com/lantern_x Spotlight.htm
Babies are smarter than you think

Two clips available on the website of the National Science Foundation:
“Berkeley Scientists Study Baby Brain Power.”
https://www.youtube.com/watch?v=JF9D8TO2K0U
Interview with U.C. Berkeley scientist, Dr. Allison Gopnik.
“Babies Think Like Scientists.”

Research of Dr. Fei Xu

Eight-month-old infants predict what is likely to happen and what is not.
http://www.youtube.com/watch?v=VrymCwZC7n0&feature=relmfu

“Babies listen intently to us and they are taking statistics as they listen to us talk.”
Quote from Dr. Patricia Kuhl’s TED talk.

Truth or Myth?

Infants are egocentric, meaning they cannot yet see others’ perspective.
Infants are aware of others’ feelings and intentions.
Explore this link to hear how the research of Dr. Karen Wynn and colleagues suggests that babies, even those as young as 3 months old, show an ability to discriminate friend from foe:

https://www.youtube.com/watch?v=anCaGBsBOxM&NR=1

Screen shot from Dr. Karen Wynn’s website, Yale University, The Infant Cognition Center

ALTRUISM IN BABIES?

More evidence from science...
How toddlers help others in need.

Warneken and Warneken clip

http://www.eva.mpg.de/psycho/study-videos.php


READY TO HELP... COOPERATION BEGINS IN INFANCY

INFANTS ARE AWARE OF OTHERS’ FEELINGS AND INTENTIONS.


### Infants, like Scientists...

- Investigate and experiment to make meaning about objects, people, and events.
- Form hypotheses... “If I do ___, ___ will happen.”
- Form theories ... “This is how things happen.”

### Naming the Learning: Cognitive Concepts (Thinking)

<table>
<thead>
<tr>
<th>Classification: Distinguishing differences</th>
<th>Seriation: Relating things in order of their difference</th>
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</thead>
<tbody>
<tr>
<td>Spatial Relations: Detecting how things fill, fit in, and move in space</td>
<td>Cause and Effect: Observing, anticipating, and reasoning about the relationship between cause and effect</td>
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<tr>
<td>Representation: Using one thing to symbolize and represent another</td>
<td>Developing understanding of number and quantity</td>
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<tr>
<td>Shapes</td>
<td>Knowledge of the natural world</td>
</tr>
<tr>
<td>Developing understanding of adding and subtracting small quantities</td>
<td>Investigates objects (living and nonliving things) through observation and exploration</td>
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<td>Communicates observations and investigations about objects</td>
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<tr>
<td>Patterning</td>
<td>Measurement (2-5 years)</td>
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### Early Head Start School Readiness Goals

- Language and literacy
- Cognition and general knowledge
- Approaches to learning
- Physical development and health
- Social and emotional development.

How does Severyn reveal his thinking?

Cognition
Approaches to Learning
Physical Development
Social-emotional Development

Notices similarities
Persists
Controls finger muscles
Shows delight

“... We are also asked to respect the meanings that children produce, the explanatory theories they develop, and their attempts to find and give answers. When we honor the children this way, the children reveal [their thinking] to us.”

Carlina Rinaldi, President, Reggio Children

“We as teachers are asked by children to see them as scientists or philosophers searching to understand something, to draw out a meaning .... We are asked to be the child’s traveling companion in this search for meaning.”

Carlina Rinaldi, President, Reggio Children

Reflective Curriculum Planning

Observe and Reflect

Document (Hold in memory)

Discuss /interpret the documentation in order to decide next steps.

What do I notice in the play? What ideas are made visible? How might we support or extend the play?

Teacher as Researcher

What might happen if we add...? How will the children respond if we...?

Planning Questions
What distinguishes reflective curriculum?

- Generated & guided by observations of how infants engage the world

![Diagram showing a process with arrows labeled Observe and Reflect, Document and Reflect, Interpret and Plan]

“What is happening in [child] care today is a revolution in thinking about curriculum. The most critical curriculum components are no longer seen as lessons and lesson plans but rather the planning of settings and experiences that allow learning to take place.” (Lally, 2014, p. 52)


**CURRICULUM AS “CONTEXTS”**

**Naming the Learning: Cognitive Concepts (Thinking)**

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**Play Spaces as Contexts for Curriculum**

Examine this series of photos. What is the intention?
What do you notice? What is the intention?

How do we offer materials that prompt young children to connect one idea to another?
Examine this series of photos. What is the intention?
What did you notice in this series of photos? What is the intention?

How do we offer infants and toddlers opportunity to explore the “natural” world, that is, creatures and plants?

Examine this series of photos. What is intention?
What Learning Might These Inspire?

What did you notice in this series of photos? What is the intention?

How do we offer materials from the everyday world? [Ordinary objects]

What learning potential do they hold? [concepts, skills, dispositions?]

Consider how such materials invite infants and toddlers to:

- Explore
- Experiment
- Connect
- Invent
- Transform
- Represent
Propose a planning question, “What will the children do if we add _____ to the _____?”

THE WRITTEN PLAN

A PLAN OF POSSIBILITIES
Examples: Planning questions

What might happen if we offer children...?

In what ways might they explore if we add to the routine / play space ...?

What might they do if we invite them to ...?

Daily Routines as Context for Curriculum

Learning Opportunities at Mealtime...
Inviting Participation During Diapering

1. Before picking up, greet the child and acknowledge what the child is doing.

2. Gesture and describe to the child what you are about to do and then wait for a reaction.

3. Narrate your actions, “I am ready to pick you up,” and notice signs of anticipation or participation.

4. Describe what you are doing throughout each part of the diapering.

5. Invite the baby to see or touch the diaper or cloth.

Planning Web: Pose Possibilities...

How might we invite infants as active participants during diapering?
Arrivals: An Invitation to Sign-in

An Invitation to Participate in Routines
Hold babies in arms for spoon-feeding, if they can’t get into seated position on their own.

For babies who can get into seated position on their own, use low chairs and tables with adult seated across.

Watch for subtle cues, like turning away, hands in front of face etc. to signal, “I’ve had enough.”

How might we invite infants as active participants during meals?

If baby reaches for spoon or cup, offer another spoon to hold during feeding.

Prior to introducing new foods, gesture and say, for example, “Here is applesauce. I’ll let you see it. Are you ready to try it?”

Planning question: How will the children respond when invited to use pitchers to pour milk?

Observation (image of children pouring milk)

Reflection (image of children pouring milk)

Plan of Possibilities: Sign-in area at entry

Date: 12/12-16

Date: Create a space near entry where toddlers can write in imitation of what their families do at arrival.

Planning Questions: What will the toddlers do if we create a place for them to sign in adjacent to where their families sign in?

Observations (image of children writing)

Interpretation

Sadness & Separation as Context for Learning

Planning question: When sad due to separating from loved ones, how will children respond if we offer them a photo of the person missed?

Observation | Photos | Reflections
--- | --- | ---
Record here what child involved in such an experience did or said. | Teachers reflect on how child responded to this new opportunity.

Guidance as Context for Learning

• How do we support children’s learning about self and other?

Conversational/Guidance as Context for Curriculum

Planning question: What will the toddlers do when we start responding to a bite or aggression with a clear limit and redirection: “I can tell you are angry because he won’t give you that truck. But it is not ok for you to bite him. Biting hurts people. Tell him, I want that truck.”

Observation | Photos | Reflections
--- | --- | ---
Record here what each child involved in such an experience did or said. | Teachers reflect on how each child responded to this new strategy for responding to biting.
Curriculum as Contexts

• Play spaces that invite children to investigate and build concepts and ideas
• Daily routines that invite children to use emerging skills and concepts
• Conversations/Interactions that support children in learning about self and others

Connecting the Dots
...Curriculum & Assessment

How do we know infants are learning and developing as we hope?

Planning question: What will the infants do in response to soap dishes added to the collection of familiar toys?

Observation
• Picks up small soap dish, mouths, fingers, peers at it
• Flings it away & it lands to his right
• Turns to look at pile of objects
• Picks from pile a soap dish identical to the one he had earlier
• Smiles as he waves it before his eyes
• Stares at soap dish dropped earlier
• Places 2nd soap dish on top of 1st one – identical match

Reflection/Interpretation
Severyn appeared to notice how one object was the same as the other object (emerging skill: classification, number, i.e. making “2”).
 Persisted

Reflective Conversation: Key Questions
When Discussing Documentation

What do you notice?
• Observe & Listen

How do children reveal their thinking?
• Assess the learning – What ideas or skills do you see? How do they relate to desired results / school readiness goals?

How does this inform what you plan next?
• Curriculum Plan

How do we invite families to join in this work?
• Family Engagement

The Multiple Uses of Documentation
Tools and Time

Essential Conditions for Documentation

- Provide easy-access, easy-to-use cameras and means for reviewing photos as a group.
- Schedule time for teams to share documentation and to engage in reflective conversation.

If we believe that children possess their own theories, interpretations, and questions...then the most important verbs in educational practice are no longer ‘to talk,’ ‘to explain’ or ‘to transmit’ — but ‘to listen.’

— Cornino Rinaldi, 2006

Additional Resources


For Deeper Study

Published by Teachers College Press
http://store.cypress.com/97814758109.ott

Mary Jane’s website with resources aligned to book:
https://sites.google.com/site/teachinglearnergaintl/
Mary Jane Maguire-Fong
mj.maguirefong@gmail.com