

Empirical Studies of the Ounce and Work Sampling in Infancy and Early Childhood

Samuel J. Meisels
Erikson Institute
smeisels@erikson.edu

Co-Authors and Collaborators

- WSHS**
- Yange Xue, Mathematica Policy Research
 - Melissa Shablott, St. Paul Public Schools
- Ounce**
- Kristy Beachy-Quick, Erikson Institute
 - Xiaoli Wen, Erikson Institute
 - Ilona Helin, Erikson Institute
 - Lisa Michael, Erikson Institute

The best way to evaluate a child's performance is to study performance, not something else.

Curriculum-Embedded Assessments

Assessments based on information from children's typical classroom performance.

The Work Sampling System

A continuous progress, instructional assessment that helps teachers document and assess children's skills, knowledge, behaviors, and academic achievements from age 3 to Grade 6.

Preschool 4: Developmental Checklist

II Language and Literacy

A	Listening	F	W	S
1	Gains meaning by listening. (p. 5)	Not Yet <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		In Process <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Proficient <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Follows two- or three-step directions. (p. 5)	Not Yet <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		In Process <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Proficient <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Demonstrates phonological awareness. (p. 5)	Not Yet <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		In Process <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Proficient <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In this presentation Dr. Meisels will mention several assessments. He is an author of two of them—the Work Sampling System and the Ounce Scale—and a consultant to the company that publishes them, Pearson Education. These assessments will be cited solely to illustrate the points raised in the lecture, rather than to promote the assessments or imply an endorsement by any particular institution.

Preschool 4: Guidelines

The Work Sampling System

III Language and Literacy

A Listening

3 Demonstrates phonological awareness.

Phonological awareness refers to the ability to hear and discriminate the sounds of language. Four year olds can attend to and distinguish the smaller units of sound within words with teacher support. They can begin to hear and discriminate syllables, the beginning sounds of words, and rhyming sounds, prerequisite skills for being able to decode words when reading. Children show developing phonological awareness by:

- listening to the word the teacher says and then finding a word to rhyme with it;
- hearing the sound of the first letter in their own names and using this ability to sound out or "read" classmates' names that begin with the same letter;
- experimenting with words, giving them new beginning sounds;
- clapping out the number of syllables in their names;
- saying the sound of a letter when they see it in a new word because they recognize it from a familiar word (for example, the "s" sound in "stop");
- hearing rhyming sounds, and creating rhyming words and nonsense words, such as "funny, bunny, rummy, tunny, sunny";
- chanting familiar rhymes with classmates during circle time or as they play.

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The best way to improve a child's performance is to teach the child, not test the child.

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Can Head Start and Pre-K Teachers Use Performance Assessments Accurately?

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Purpose of Study

To evaluate the reliability and validity of *Work Sampling for Head Start (WSHS)* as a measure of children's language, literacy, and mathematics.

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Principal Study Questions

1. Is WSHS a reliable and valid means of evaluating children's achievement and progress?
2. What does the WSHS Checklist add to predictions of children's achievement over and above demographic variables?
3. Does WSHS identify children at risk for learning difficulties as accurately as normative measures?

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Sample for the Study

- Pre-K: Head Start, school-, and community-based programs
- N = 112; Mean age = 4.6 years
- 16 classrooms (volunteer), 5 schools
- 62.5% African-American, 9% Hispanic; 95% low income; 54.5% male; 12% special needs

Outcome Measures

- *Test of Early Reading Ability* (3d edition)
- *Test of Early Mathematics Ability* (3d edition)

Results of the WSHS Validity Study (Pre-K)

1. WSHS has high internal reliability (alphas = .90 – .94) and moderately high correlations between fall and spring ratings (.71 for literacy and .65 for math).

Results of the WSHS Validity Study (Pre-K), cont.

2. WSS correlates moderately well (.30 - .44) with standardized, individually administered psychoeducational tests of early reading and math (TERA and TEMA)

Mean Scores on Normative Tests (S.D.)

	Fall	Spring
TEMA-3	82.79 (13.42)	83.77 (14.41)
TERA-3	90.27 (11.43)	90.67 (11.78)

Results of the WSHS Validity Study (Pre-K), cont.

3. After adjusting for demographics, WSHS adds unique information (~20%) to predictions about children's early reading and math achievement.

Results of the WSS Validity Study (Pre-K), cont.

4. Data obtained from WSS accurately discriminate between children who are and are not at risk.

Conclusions - 1

WSHS has excellent internal consistency and reliability within domains across time.

Conclusions - 2

WSHS is a valid and effective assessment of children's learning.

Conclusions - 3

WSHS ratings accurately identify children at risk for learning difficulties in literacy and math.

Functional Assessment

Assessments that focus on everyday, naturally occurring, practical behaviors and accomplishments

The Ounce Scale Basic Characteristics

- A relationship-building tool
- Enhances parent and provider knowledge, control, and empowerment
- Helps differentiate and expand parents' and providers' perceptions of babies

Observation Record Toddlers I: 18–24 months

Toddler: 1
18–24 months

I. Personal Connections: It's About Trust

How toddlers show trust

How does the toddler show that the presence of familiar adults helps her do things on her own?


Toddlers need to see the adults who are important to them as they play. Although their increased mobility allows them to be more active and self-reliant, they are easily scared by the new world now open to them. They need trusted adults nearby so they can feel safe.

The toddler might do one or more of the following:

- Gain courage—try the slide at the park, but only after sitting beside her caregiver for a while.
- Stay close—bring toys to an adult and pile them on his or her lap instead of playing in the other room.
- Try again—come back to where her caregiver is sitting, stand there briefly, and then go back to the sand pile.
- Show she needs you—go off to explore something while a familiar adult is sitting nearby, but begin to cry when that person moves toward the door.
- Take a comforting look—glance at a caregiver for reassurance and then go off to play with friends in another room.

How does this toddler show that the presence of familiar adults helps her do things? (Include dates.)

Developmental Profile Toddlers I: 18–24 months



The Ounce Scale **Toddlers I**
Developmental Profile

Child _____
Date of birth _____ Age _____
Teacher/Home Visitor _____
Assessment completed by _____
Today's date _____

24 Months

SOCIAL and EMOTIONAL

I. Personal Connections: It's About Trust

- Seeks support of familiar adults to try things (p. 42)
- Acts cautiously around unfamiliar adults (p. 43)

II. Feelings About Self: Learning About Me

- Expresses own ideas, interests, and feelings (p. 43)
- Tries to manage own behavior (p. 44)

III. Relationships With Other Children:

Child to Child

- Watches and plays briefly with other children (p. 45)
- Shows awareness of other children's feelings (p. 46)

Comments: _____

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How accurately do Early Head Start teachers use observational assessments?

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The Ounce Scale Research Questions

1. Is the Ounce a reliable and valid assessment of learning and development?
2. Does the Ounce identify children in need of special instruction or services?
3. Does the Ounce have an impact on teaching and caregiving?

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Sample for the Validation Project

- Birth – 42 months, cross-sectional
- N = 251 children in 8 age groups
- 124 classrooms (volunteer) from 7 Early Head Start programs
- 63% African-American, 26% Hispanic; 92% low income; 55% male; 11% special needs (IFSP)

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Outcome Assessments

- *Bayley Scales of Infant Development-II* Mental and Motor Scale;
- *Preschool Language Scale-4*;
- *ASQ: Social Emotional* (completed by teachers)

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Results of the Study

1. **Reliability:** Moderate (overall Cronbach alpha = .65 [range = .19-.89])
2. **Validity:** Correlations between Ounce Developmental Profiles and criterion measures of mental, motor, and language are moderate (.28 - .32) but higher for social-emotional (.47).

Correlations between Ounce Scales and Criterion Measures

Ounce Scale	ASQ:SE	PLS-4	Bayley-II Mental	Bayley-II Motor
Social-Emotional	.47**			
Language		.32**		
Cognition			.31**	
Motor				.28**

* $p < .05$. ** $p < .01$

Results of the Study - 2

3. The more seriously delayed the child, as rated by the Ounce, the less competently the child performed on the outcomes.
4. The Ounce significantly predicted performance over and above demographics, especially on social-emotional.

Does the Ounce Distinguish Between Children At-Risk and Not At-Risk?

More than 70% of the infants and toddlers who are at risk, as defined by the standardized assessments, were correctly identified.

“Needs Development” Rating

Teachers appeared to systematically avoid the rating, *Needs Development*, particularly for younger children in the sample.

Teacher Interview Study: Description of Sample

- 21 teachers from five EHS centers (73% response rate) + 7 program managers
- All completed at least two Observation Records and Developmental Profiles that were used in the Ounce Scale Validation Study
- Range of teachers' education: highest = Masters degree, lowest = high school
- 16 African American, 3 Hispanic, 9 White (all female)

Teacher Interview Study: Content of Questions

1. How teachers use the different components and ratings of the Ounce Scale
2. How teachers use the Ounce Scale for planning, setting goals, and working with parents
3. Training and support teachers were given in use of the Ounce Scale
4. Global questions, e.g., has the Ounce Scale changed them as teachers, do they like it?

Reasons For Not Using “Needs Development”

1. Teachers viewed this rating negatively
2. Teachers had difficulty applying the standards to atypical behavior
3. The age range may have made caregivers reluctant to say that a child needs development

Reasons For Not Using “Needs Development”, cont.

4. No intermediate rating levels were available
5. Teachers wanted to protect parents from “bad news”

How Did the Ounce Affect Teachers and Caregivers?

1. Assessing children
2. Knowledge and understanding of child development
3. Setting goals
4. Communication with parents
5. Relationships with co-workers

Teacher Characteristics That Are Associated with Greater Accuracy in Use of the Ounce

- Higher levels of education
- More training in early care and education
- Being relatively new to working with infants and toddlers
- Longer use of the Ounce Scale

**Understanding the
child within
context is key to
understanding the
child**