

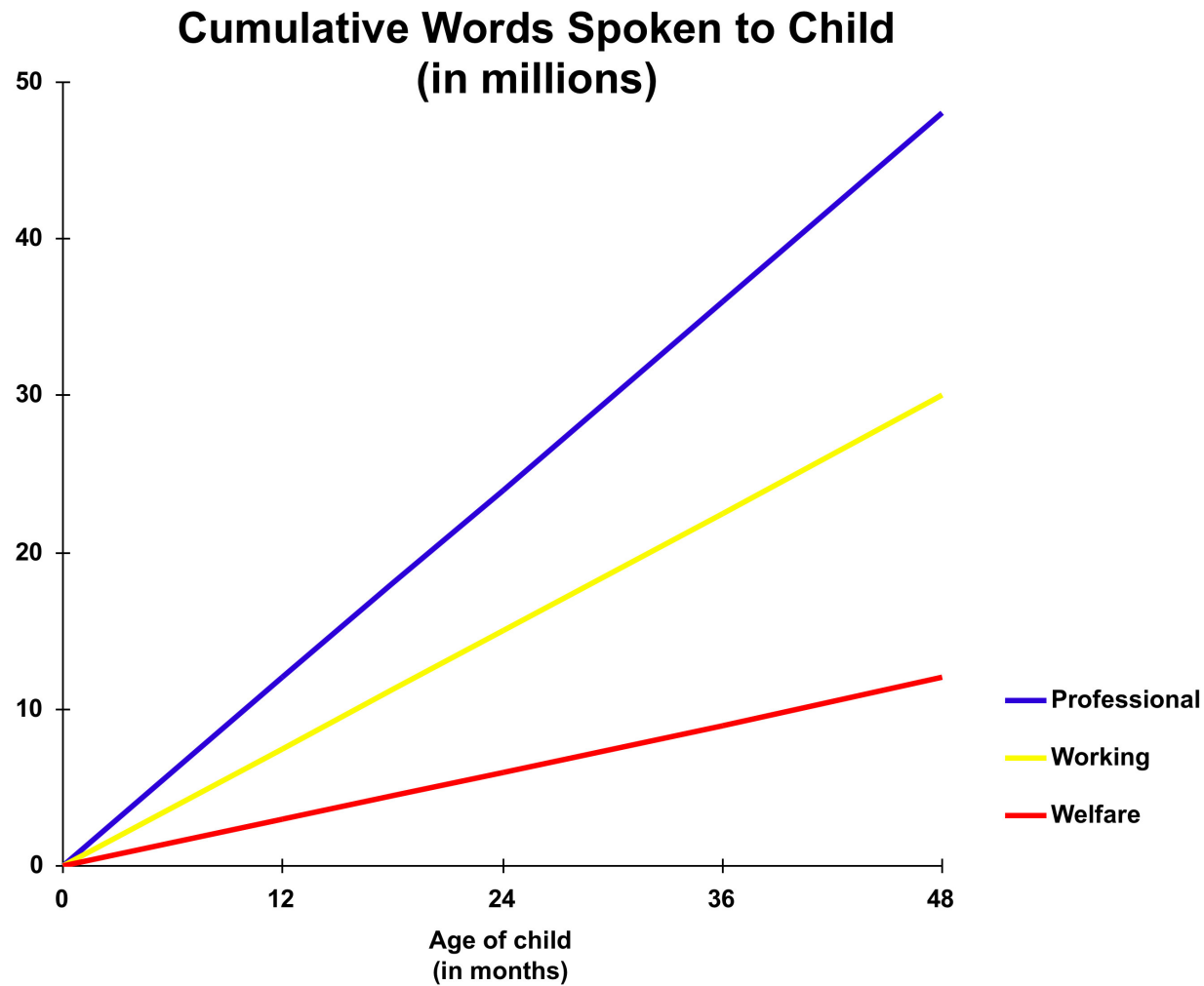


Into the wild with LENA: Project SWELL

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Cumulative Language Experiences



Early literacy experiences

Some parents spend 30 to 45 minutes a day reading to their children; 180 to 270 hours per year; in 6 years over 1,000 hours spent reading aloud (Adams, 1990).

Other parents spend less than 20 minutes per month; *less than four hours per year*. Over six years, less than 25 hours reading (Teale, 1986).

Not Everyone Shares this View

Words! Words! Words! I'm so sick of words!
I get words all day through;
First from him, now from you!
Is that all you blighters can do?



- Eliza Doolittle



Careful Studies Show Big Gains for Parents *and* Children

- The Abecedarian Project
 - Careful study of intervention for poor children
 - Full-time, high-quality educational intervention in a childcare setting (infancy to age 5)
 - Individualized intervention (social, emotional, cognitive, and language development)
 - Progress monitored over time (ages 12, 15, and 21)-- significant, long lasting benefits were associated with the program
 - \$43,000/child; 7% rate of return

Kindergarten PPVT and later reading comprehension

End of Grade One -- .45

End of Grade Four -- .62

End of Grade Seven -- .69

Early vocabulary boost to reading comprehension gets stronger as reading material becomes more complex.

Snow, 2002



Parents/Child Shared Storybook Reading Produces Powerful Results

- Shared storybook reading enhances emergent literacy
 - Narrative structure/story grammar
 - Motivation
 - Oral language/vocabulary
 - Alphabet knowledge
 - Print concepts
 - Phonological awareness
- Dialog (conversation) is a key foundation of cognition

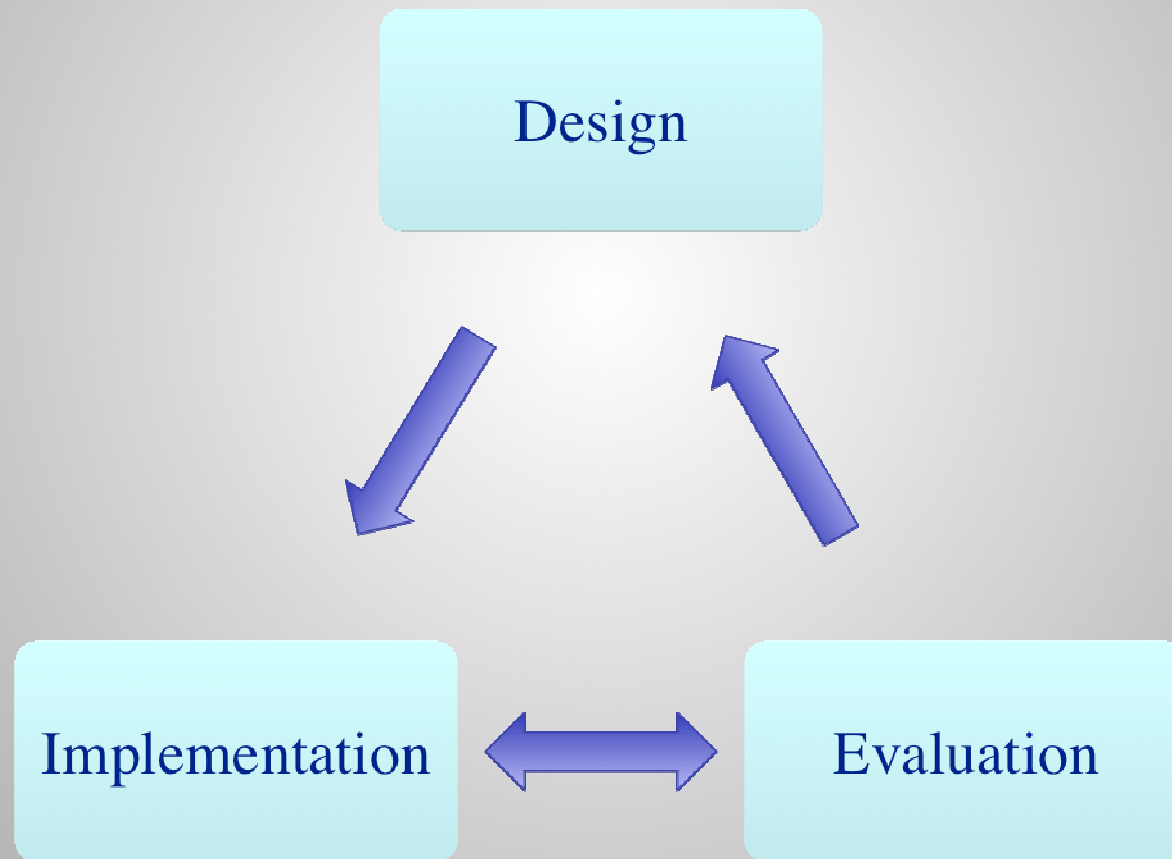
So Why Can't We Make it Work?

- Literacy interventions in the family context have great potential to promote reading development in children. However, the results of meta-analyses indicate that family-based approaches tend not to be as effective as expected. - McElvany and van Steensel (2009)
- National Early Literacy Panel concludes that there is much we do not know about the development of early literacy skills and about the effectiveness of interventions. (2008)

Between the Lab and the Street

- Choice of program to implement
- Resources available
- Fidelity of implementation
- Qualifications of staff and management
- Characteristics of families
 - recruitment and retention
- The child's environment:
 - schools, home, neighborhood

The Policy Innovation Process



Program Design

- Theory of language development
- Evidence
 - Epidemiological, anecdotal, experimental
- Programs: all claiming evidence of effect
 - NFP, PAT, HIPPY
 - Dialogic reading; Read Together/Talk Together
 - ROAR

And Yet

- In the wild:
 - It's hard to find statistically significant effects
 - Effect sizes are small
- None of this should surprise us
 - Everything depends on the circumstances and quality of *implementation*
 - Desirable outcomes only occur when effective, appropriate programs are implemented well.

Implementation

- Who are the subject families?
 - What are their characteristics and incentives?
 - How are they recruited and retained?
- What other services are in the mix?
- Does the implementation have fidelity?
- Do agency resources match the need?
 - Capacity, staff quality and training
- Is there feedback? Retraining?

Evaluation

- Immediate
 - What are the critical indicators of success?
 - What are reasonable benchmarks?
 - Are observations consistent with expectations?
- Long-term
 - What are appropriate outcome measures?
 - Can you control for non-treatment influences?
 - Many are endogenous to selection into treatment

LENA and Project SWELL

- Use our ability to observe directly both the implementation and the response to:
 - Implement a program with high fidelity (stereo?)
 - Lower the cost of implementation (no nurses!)
 - Serve all families by responding to specific circumstances
 - Provide families with feedback on their progress
 - Bundle it all up for easy implementation

Educational Levels in SW Virginia

County/ City	Population Adult 25 years +		% Completed High School		% Completed College	
	1990	2000	1990	2000	1990	2000
Buchanan	19,467	18,851	42.5	52.9	6.4	8.0
Dickenson	11,189	11,308	47.1	58.9	6.0	6.7
Lee	15,983	16,314	48.0	60.6	6.5	9.5
Russell	18,842	21,362	50.6	62.5	6.7	9.4
Scott	15,904	16,846	51.2	64.4	5.9	8.3
Tazewell	30,096	31,291	57.3	67.5	9.1	11.0
Wise (+Norton)	27,621	29,396	52.4	62.9	8.9	11.1
Virginia	3,974,814	4,666,574	75.2	81.5	24.5	29.5
USA	158,868,436	182,211,639	75.2	80.4	20.3	24.4

Project SWELL

- How can we take the results outside of research/clinical settings to effectively meet the needs of families with children at risk for school failure?
- Are we able to take the project to scale and into the hollers of Appalachia?
- Can it be implemented by understaffed, underfunded, stressed-out, social service agencies, which are constantly under threat of losing their funding?

Continuous Observation and Response

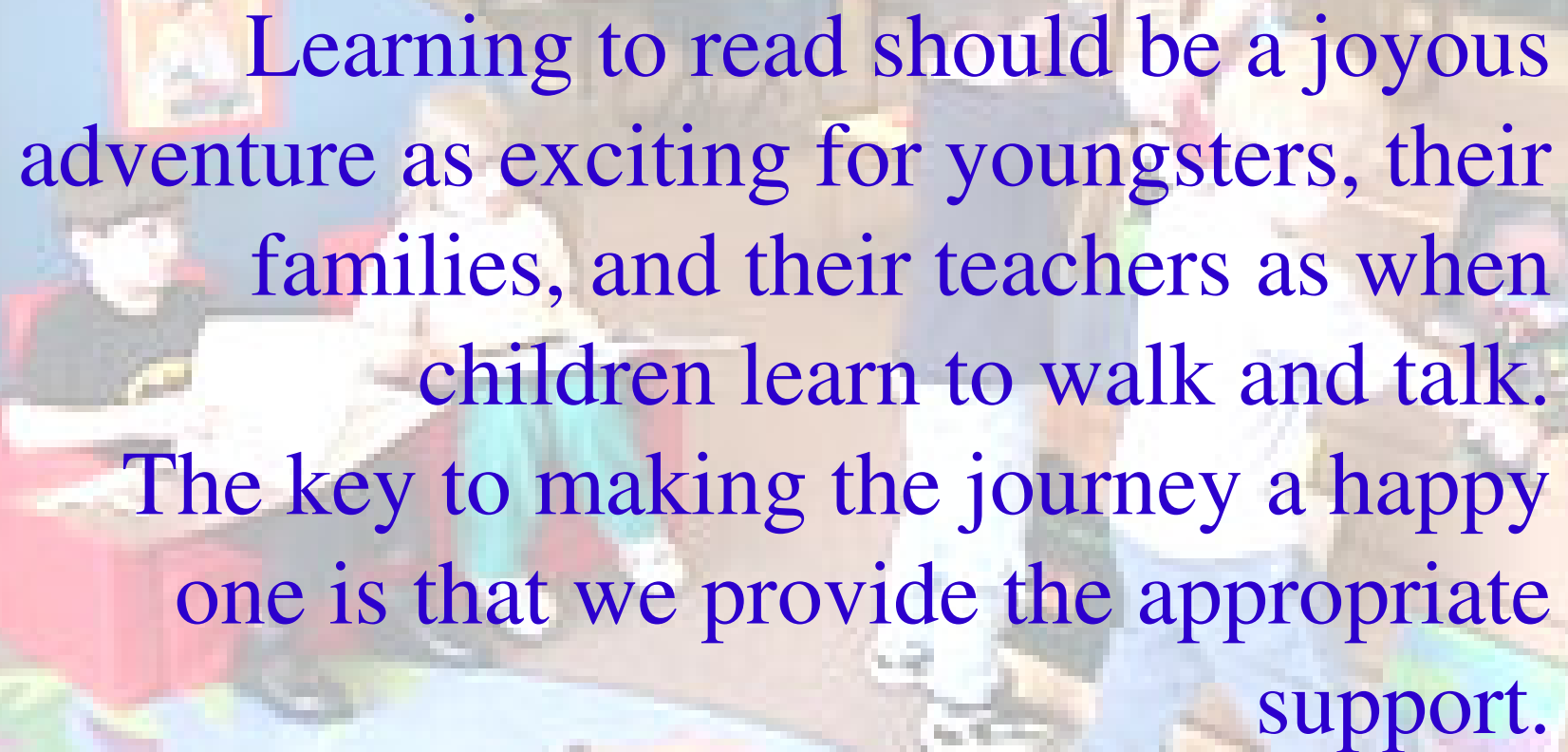
- Recruit Early Head Start families
- Test children, sample home environment
- 12 week 'read and play' dialogic intervention
 - Record selected sessions with DLP
 - Evaluate session for fidelity and family response
 - Sample home sound environment and give feedback
 - Apply rules for adjusting treatment
- Post treatment evaluation with follow-up

Wrap Program Together with Expertise

- Can we create an intervention-in-a-box?
- What's inside
 - Intervention options
 - Protocol for implementation
 - Supplies, evaluation instruments
 - Management software with expert assist (like Turbo Tax!)
 - How are you doing?
 - What adjustments might be appropriate?
 - Include self-audit to improve fidelity

A Tall Order?

- This may seem ambitious
- But if we know how to create literacy in the lab, then we should be able to figure out how to engineer it for the wild

The background image is a blurred photograph of a classroom. In the foreground, a child is sitting at a red table, looking down at a book. To the right, a teacher or adult is standing, interacting with a group of children. The room has blue walls, a large rug with a colorful pattern, and several wooden tables and chairs. The overall atmosphere is bright and educational.

Learning to read should be a joyous
adventure as exciting for youngsters, their
families, and their teachers as when
children learn to walk and talk.
The key to making the journey a happy
one is that we provide the appropriate
support.

Moustafa, 1997

Or as Eliza put it on
discovering the
power in words:

“The rain in Spain stays
mainly in the plain.”

