



NEBRASKA CENTER FOR RESEARCH  
CHILDREN, YOUTH, FAMILIES & SCHOOLS

# Early Language and Literacy: Supporting Teachers' Data-Based Decision-Making

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# Multi-tiered Early Literacy Approach

- Response to Intervention (RtI) focuses on *preventing children's later academic delay* through a systematic problem-solving process; allows for early recognition and data-based methods to evaluate effectiveness of instruction
- Goal of *preschool tiered intervention (Pre-3T)*: prevent or ameliorate delays by providing supports at the earliest stages, monitoring effects systematically, and adjusting delivery intentionally to support individual needs

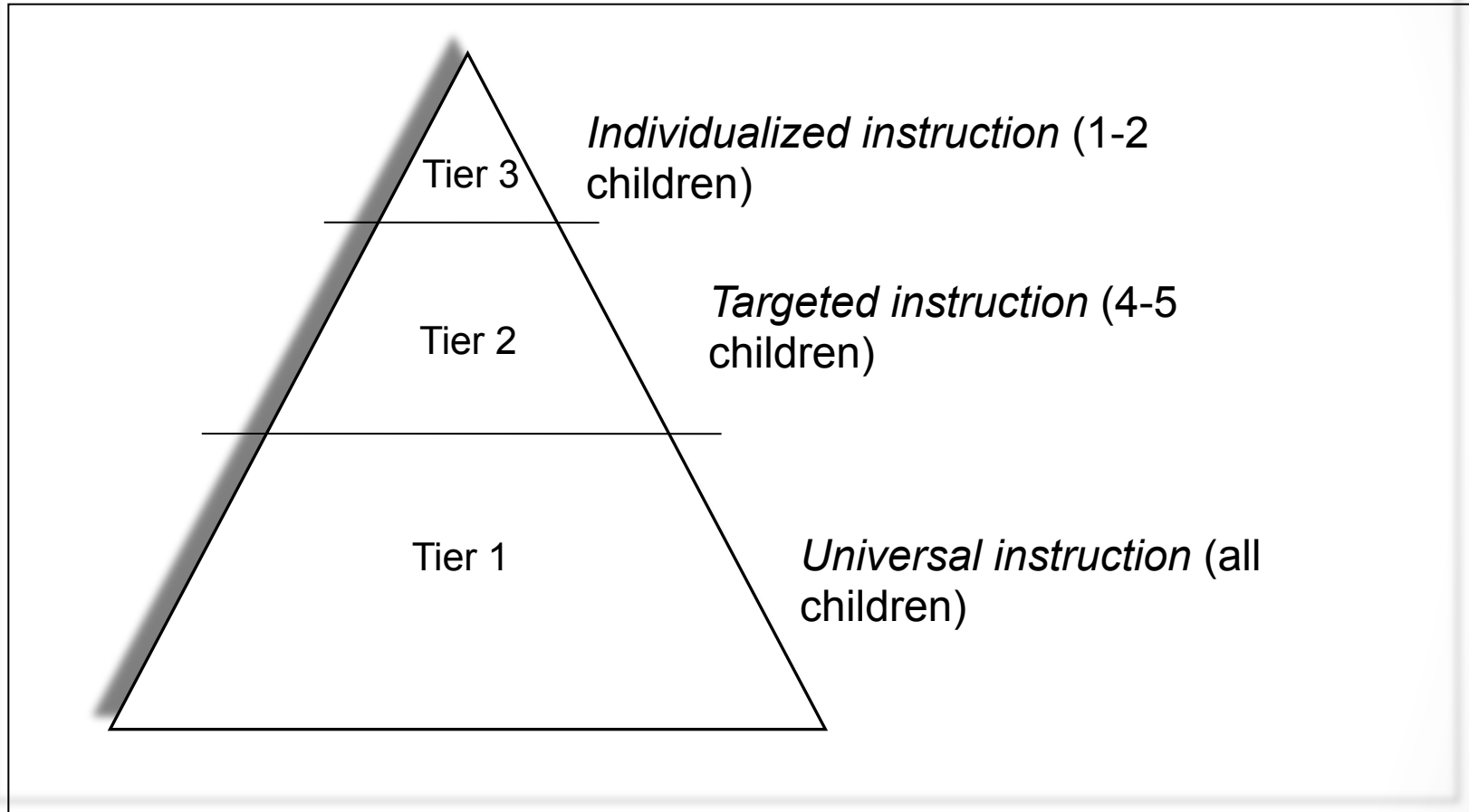


# Multi-tiered Early Literacy Approach

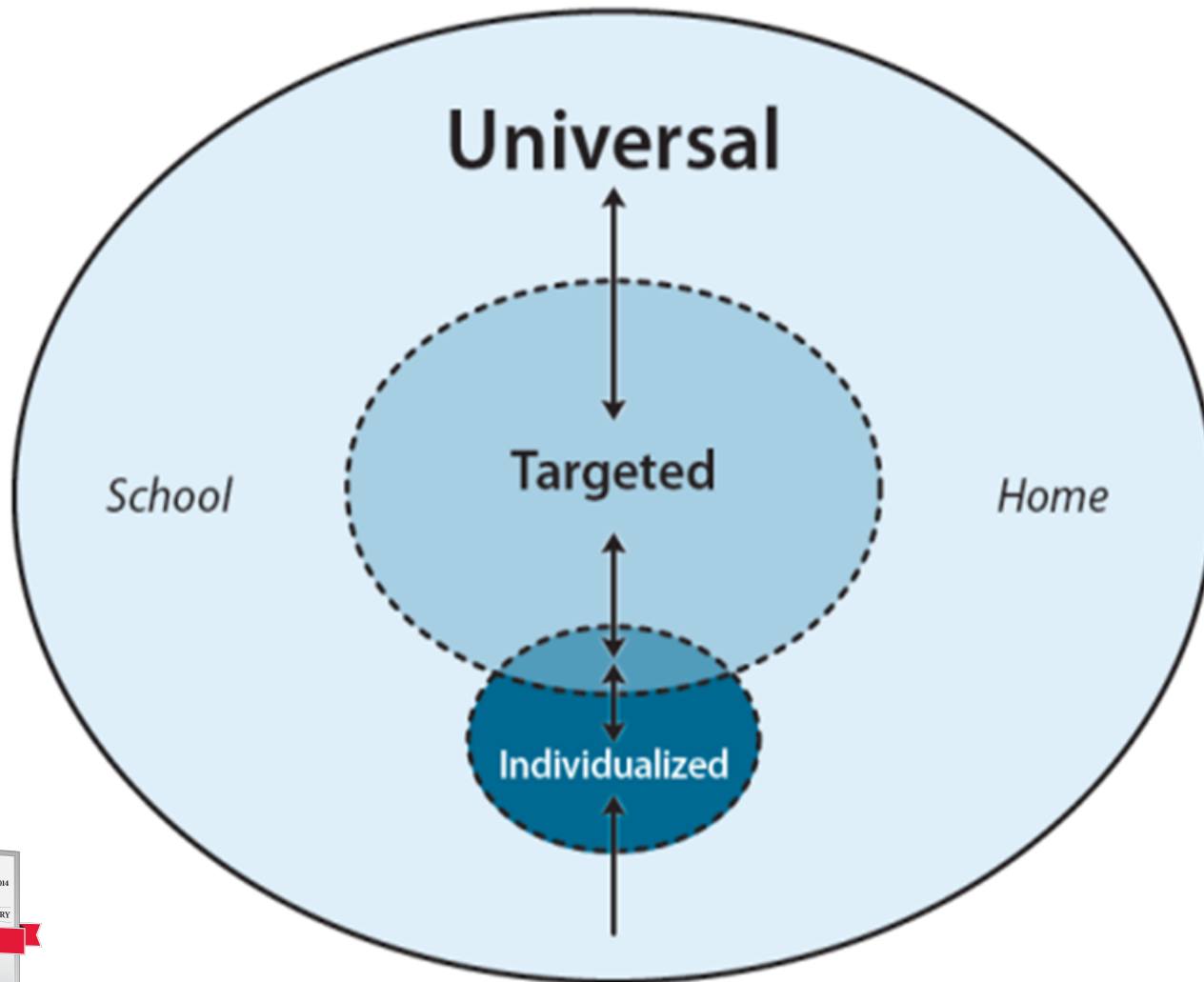
- Emphasis on universal level (Tier 1); high quality, research based interventions to ensure all children access to high quality language and literacy experiences
- Targeted interventions (Tier 2) provide intensified efforts for children needing extra supports
- Individualized, intensive services (Tier 3) are focused on individual student via a structured problem-solving process



# Traditional 3-Tiered Models



# Pre-3T Conceptualization



# Purpose of the Pre-3T Project

- Over a three year period, we partnered with agencies, literacy coaches, teachers, and families to *develop* and *pilot* a multi-tiered prevention model (universal, targeted, individualized) in early education for children at risk of reading difficulties.
- Existing universal (Tier 1) programming was leveraged to develop and implement effective targeted and individualized (Tier 2 and Tier 3) interventions.
- Target language and literacy skills: *oral language, phonological awareness, and alphabet knowledge*



# Core Elements of Pre-3T Model

- Evidence-based Interventions
- Differentiated Grouping
- Progress Monitoring
- **Data-based Decision Making**
- Family Engagement
- Professional Development



# Data-Based Decision-Making

- A responsive data-based decision making protocol was collaboratively developed with project partners (preschool teachers and literacy coaches) and field tested.
- The purpose of this presentation is to describe the decision-making process and preliminary results demonstrating its feasibility and effectiveness.





# Decision-Making Protocol

- Each child's performance on key pre-literacy indicators was monitored regularly using a multi-informant, multi-method approach
  - Standardized and curriculum-based measures
  - Classroom assessments and natural observations from teachers and parents
  - Spanish and English assessments were collected for dual-language learners
- Resulting data were used by teachers as a basis for making instructional decisions



# Data-Based Decision Making

Literacy coaches supported educators to

- (a) identify children's strengths and concerns;
- (b) analyze conditions (skills/environment) contributing to needs;
- (c) generate hypotheses for children's difficulties;
- (d) identify hypothesis-driven, responsive, research-based strategies;
- (e) monitor intervention integrity in the classroom;
- (f) evaluate outcomes of interventions.



# Data-Based Decision Making

- The process maximized accuracy in skill selection, ensured fidelity of implementation in instructional strategies, and evaluated children's responses to strategies using continuous and sensitive data collection procedures.
- This problem-solving framework was applied to assess children's progress and make decisions regarding how to differentiate instruction and interventions across *home* and *school*.



What are you taking when you leave home or school to go somewhere?



1. Are you taking a trip when you take a nap on the couch?
2. Are you taking a trip when you go to the grocery store with your mom?
3. Is a trip a game you play with your friends or family?
4. Is a trip someplace you go with your friends or family?

Which of these pictures shows children getting ready to take a trip?



## Oral Language Decision Making Protocol

This decision making protocol was developed from the Pre3T study, a development study focused on promoting language and literacy skills for young children at risk for reading difficulties using a multi-tiered approach. In the area of oral language, standardized assessment information (see list of tools below) was collected in the fall, winter, and spring to determine children's progress with oral language skills. Curriculum based measures (CBMs) were also collected throughout each unit of instruction (pre-, mid-, post-unit) to measure children's progress with selected vocabulary words. The information gathered from these sources, along with teacher observations, additional assessments, and contextual information (e.g., family observations, previous language experiences, time in preschool program) were used to determine whether or not children were 'on-track' with their language skills and whether additional supports were needed to help them make progress. This protocol describes the process for collecting and evaluating assessment information to make 'classifications' (green = on-track to meet end-of-year targets; yellow = progress is below benchmark targets) regarding children's progress with oral language skills and to determine if additional supports are needed universally (for all children), for a targeted group of children, or for individual children. Ideally, these decisions should be made with input from teaching teams and/or literacy coach support.

### Standardized Tools

*Get Ready to Read* (GRTR; Whitehurst & Lonigan, 2009) - Total score

Spanish

*Test of Preschool Early Literacy* (TOPEL; Lonigan, Wagner, Torgeson, & Rashotte, 2007) – Definitional Vocabulary subscale.

*Woodcock-Munoz Language Survey – Revised* (WMLS-R; Fredrick et al., 2010) – Picture Vocabulary subscale.

*Ages & Stages Questionnaires – Third Edition* (ASQ – 3; Squires & Bricker, 2009) – Communication subscale.

*Bilingual Early Language Assessment* (BELA; Tabors & Heise-Baigorrria, 2004) – Total score.

### 1. Look at all data sources.

a. Determine if green/yellow using cut points (see classification keys below):

- i. Get Ready to Read
- ii. TOPEL – Definitional Vocabulary score
- iii. School assessments (e.g. GOLD)

b. Consider additional information:

- i. Teacher observation
- ii. CBM (80% correct across all items)
- iii. For Spanish speakers, consider child's language skill at beginning of year.

## 2. Determine level of support (use guiding questions if needed).

To determine level of additional support needed, consider both overall classroom profile (percentage green vs. yellow) compared with individual children. For example, if the majority of children are classified as "yellow" (below benchmark) more intensified universal supports would be appropriate versus targeted or individualized support.

### Fall:

- a. *If green* – continue with universal instruction.
- b. *If yellow* – discuss if more supports are needed.
- c. *If unsure* – monitor progress for one or two more units, then determine classification and need for support based on rate of progress.

### Winter:

- a. *If green* - continue with universal instruction. If previously yellow, discuss if more supports are necessary to maintain progress.
- b. *If yellow* –look at child's rate of change from fall to spring to determine level of support. Determine if:
  - i. Support is sufficient (rate of progress is "good"; if continue at same rate would reach end of year target).
  - ii. Need additional support (rate of progress is "slow"; if continue at same rate would NOT reach end of year target).

### Spring:

- a. *If green* - If previously yellow, discuss if continued supports are necessary to maintain progress; determine transition plan to maintain support.
- b. *If yellow* - discuss plans for transitioning to kindergarten to maintain or increase levels of support.

## Classification Keys

<b>TOPEL</b>	Definitional Vocab
<b>YELLOW</b>	Below 90
<b>GREEN</b>	90 or above

<b>CBM</b>	Oral Language
<b>YELLOW</b>	<80% for two consecutive units
<b>GREEN</b>	≥80% for two consecutive units

<b>ASQ</b>	Communication
<b>YELLOW</b>	Less than 30.72
<b>GREEN</b>	30.72 or more

<b>GET READY TO READ</b>	<b>YELLOW</b>	<b>GREEN</b>
SEPTEMBER	0 - 11	12 or above
December- January	0-13	14 or above
April-May	0-16	17 or above

\*Assessments, GOLD, Teacher Obs.

Indicate if student is on track (green) or if there is a concern (yellow).

Green= on track to meet end of year (K entry) targets

Yellow = progress below benchmark targets

## Spanish-Speaking Children – Fall Language Classification Protocol

For children who are identified as Spanish-speaking by parents, or score if they score a 0,1 or 2 on the English Language Proficiency Test, children will be assessed in both English and Spanish. Using results from English and Spanish oral language assessments, children will be given one of four profiles (see language classification chart).

TOPEL - ENGLISH	Definitional Vocab
YELLOW	Below 90
GREEN	90 or above

GET READY TO READ – ENGLISH/SPANISH	
YELLOW	11 or below
GREEN	12 or above

WMLS – SPANISH	Picture Vocabulary
YELLOW	Below 85
GREEN	85 or above

BELA – ENGLISH/SPANISH	
YELLOW	17 and below
GREEN	Above 17

ASQ - ENGLISH	Communication
YELLOW	Less than 30.72
GREEN	30.72 or more

Language Classifications	<b>High Spanish:</b> BELA SPANISH GREEN WMLS GREEN	<b>Low Spanish:</b> BELA SPANISH YELLOW WMLS YELLOW
<b>High English:</b> TOPEL DV GREEN GRTR GREEN	No intervention – no monitoring (universal)	No intervention – no monitoring (universal)
<b>Low English:</b> TOPEL DV YELLOW GRTR YELLOW	<p>Delay intervention – focus on Tier 1 with support in Spanish if possible</p> <p>Continue to Monitor – intervene if no progress after two units</p> <p>Consider child characteristics including language experiences; time in preschool program (1yr vs. 2yrs)</p>	Provide additional supports (Tier 2) and monitor progress





### Tune-up Checklist

Complete the Tune-up Checklist for suggestions about how to 1) take into consideration child factors, 2) increase opportunities to learn, 3) identify skill components that need emphasis, 4) change grouping, 5) make instruction more explicit, and 6) support family engagement.

Classroom: _____ Teachers: _____ Coach: _____ Date: _____ Child(ren)/Group needing additional support: _____ Tune-up Modification Goal: _____ Target Date: _____		Classroom	Family				
Area of need (Oral Language, PA, AK, Print Awareness)	Yes	No	Notes:	Strategy used with group:			
<i>Child Considerations</i>				Check in dates:			
Does the child(ren) have poor attendance? Can that be improved? Is the child(ren) overly shy or disruptive or inattentive? Briefly describe. Is the child(ren) a first or second year preschool student?							<b>Implementation Steps: (fidelity)</b>  <b>Frequency of Implementation:</b>  <b>Target Date/Date Completed:</b>  <b>Note progress monitoring data/child outcomes:</b>  <b>Note progress toward goal:</b>  <b>Modification Made:</b>  <b>Date Goal Complete:</b>
<i>Opportunities to Learn</i>							
Does lesson plan and instruction reflect strong enough emphasis in the area of need? Can the skill be emphasized during another part of the instructional day?							
<i>Content of Instruction</i>							
Is there a specific skill(s) within the area of need to be mastered? Is there an opportunity to re-teach the skill? Is there a pre-skill that the children need to learn? Can instruction become more concrete with physical objects incorporated?							
<i>Grouping for Instruction</i>							
Do children need to be regrouped to better fit their skill need? Can grouping sizes be changed?							
<i>Explicitness of Instruction</i>							
Is it possible to include more I do it; We do it; You do it opportunities? Can child response be changed (choral and group responding)? Are there opportunities to better monitor accuracy of child responses and then provide immediate, appropriate, positive feedback?							
<i>Family Considerations</i>							
Have curriculum goals and child's progress been communicated? Has family(ies) had opportunities to participate in activities with enough guidance? Could more support be offered to help family(ies) fully engage?							

*What classroom features, groups or individual children are targeted?*

*What sources of data are being used to identify target areas?*

# Guiding Questions for Evaluation

- What was the progress of children who experienced the *multi-tiered* and the *intensified universal* interventions?
- What was the classification distribution of children at the fall and spring assessment points?
- What percentage of children experienced meaningful gains as a function of the Pre-3T intervention?
- Did the gains vary by language (English, Spanish)?



# Sample: Year 3 Pilot Test

- Nebraska and Kansas early childhood programs (e.g., Head Start)
- 66 children and their families
  - All children were 4 years old and Kindergarten-bound
    - 35% English-speaking
    - 65% Spanish-speaking
  - Average age of parent = 30 years old
    - 88% mothers; 12% father
    - 36% less than high school degree
    - 60% not working or working part-time

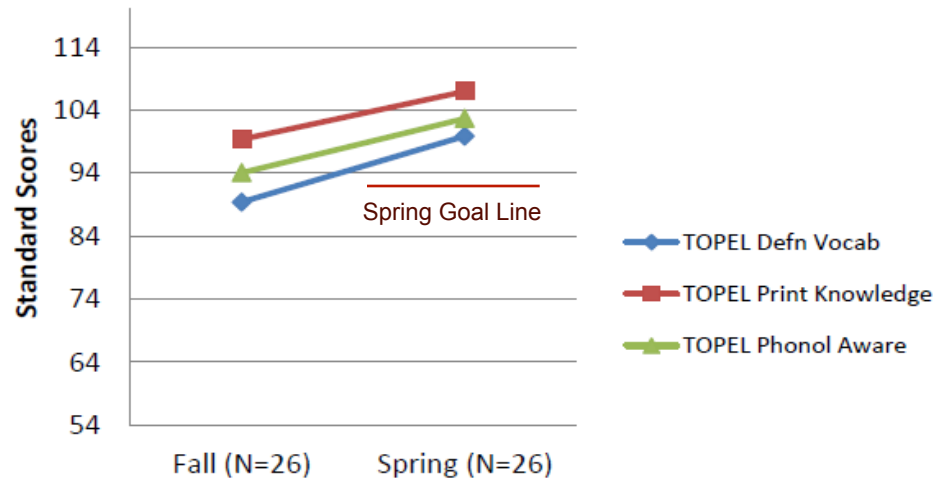


# Primary Outcome Measures

- Test of Preschool Early Literacy (TOPEL; Lonigan et al., 2007)
  - Definitional Vocabulary subscale
  - Mean = 100; SD = 15
- Get Ready to Read (GRTR; Whitehurst & Lonigan, 2009)
  - Total Score
  - Range = 0 - 25
- Woodcock-Munoz Language Survey (WMLS; Fredrick et al., 2010)
  - Picture Vocabulary subscale
  - Mean = 100; SD = 15

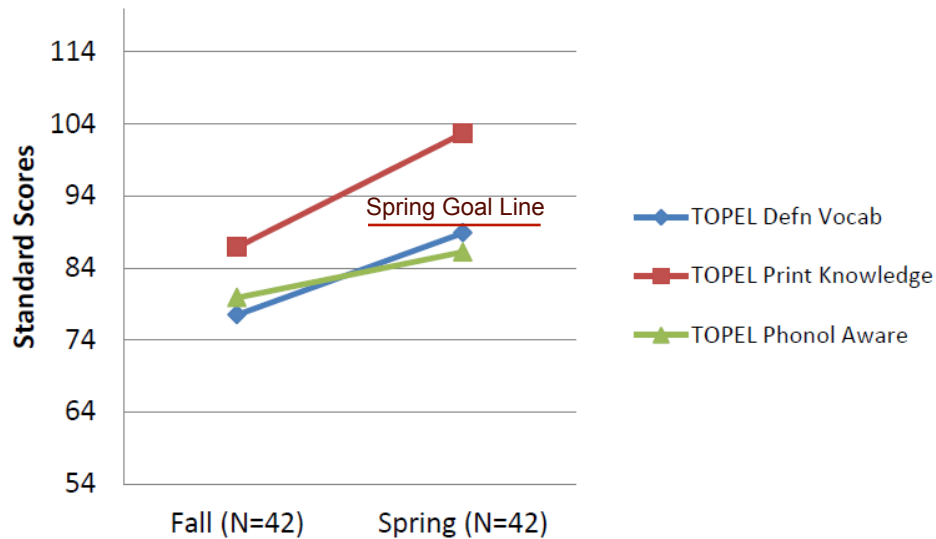


**Fig 1. Multi-Tier Growth - TOPEL**

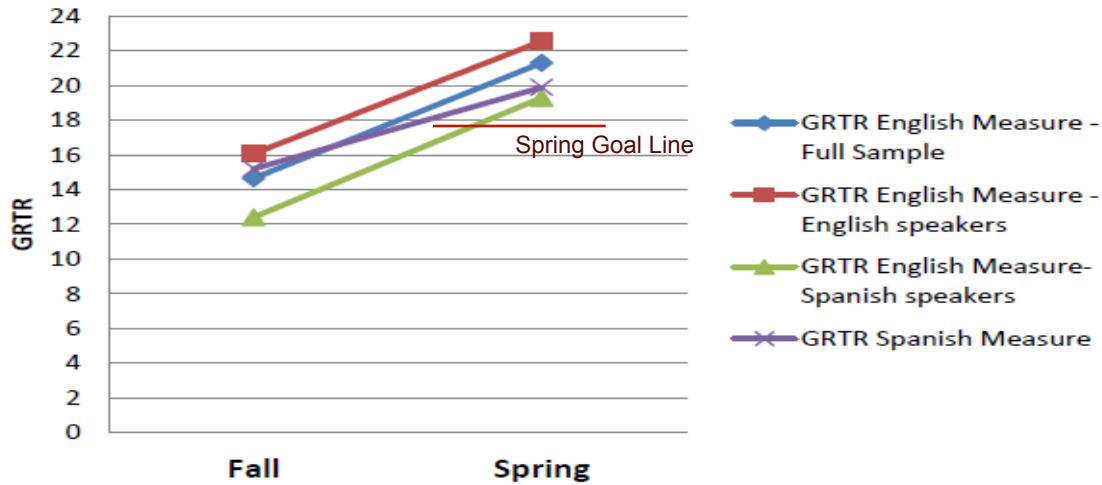


Note. TOPEL Mean = 100; SD = 15; Target for end of year = 90

**Fig. 2 Intensified Universal Growth - TOPEL**

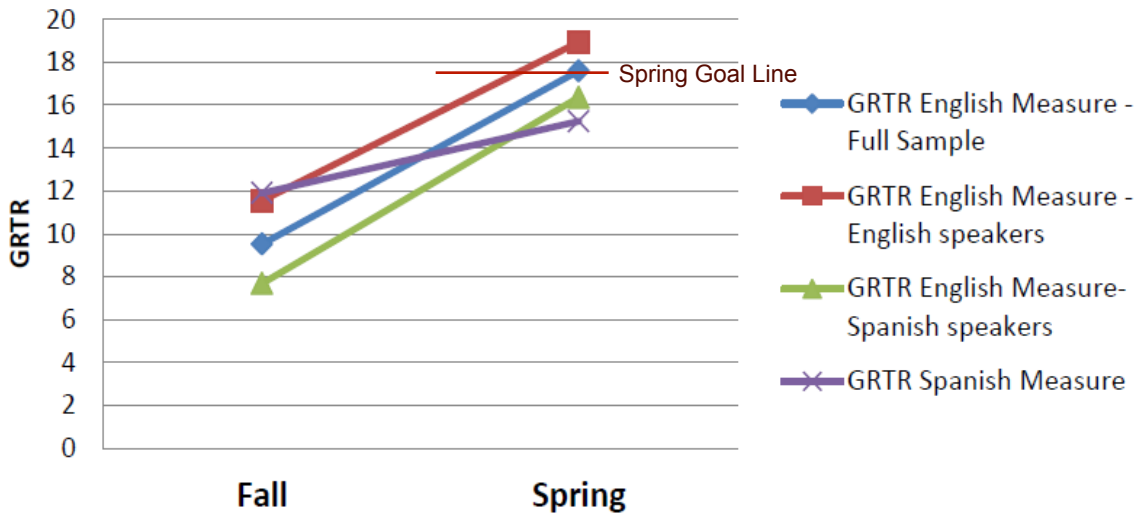


**Fig 3. Multi-Tier Growth - Get Ready to Read**

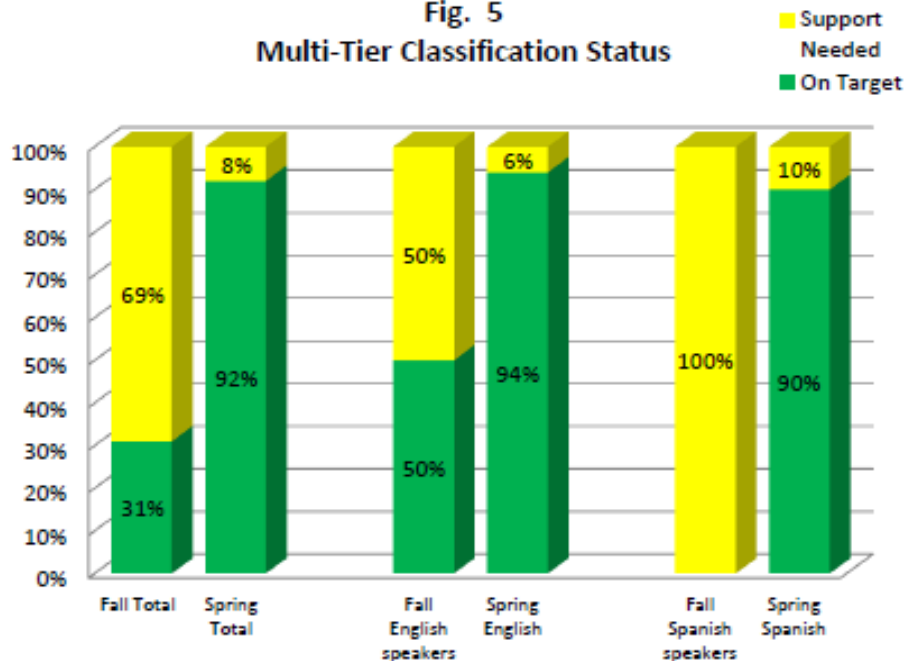


Note. Target for GRTR = 12 or more in Fall and 17 or more in Spring

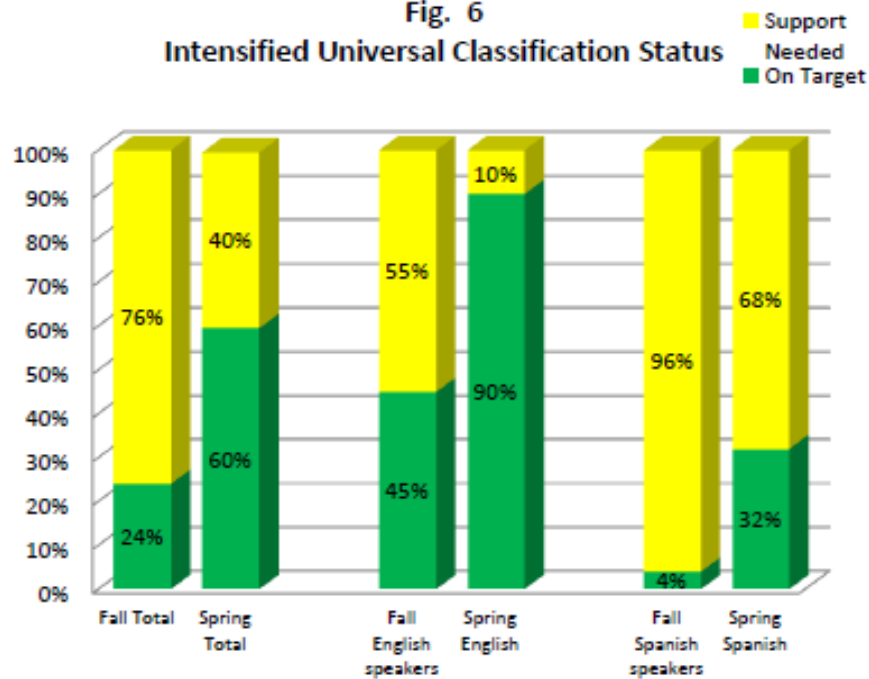
**Fig. 4  
Intensified Universal Growth - Get Ready to Read**



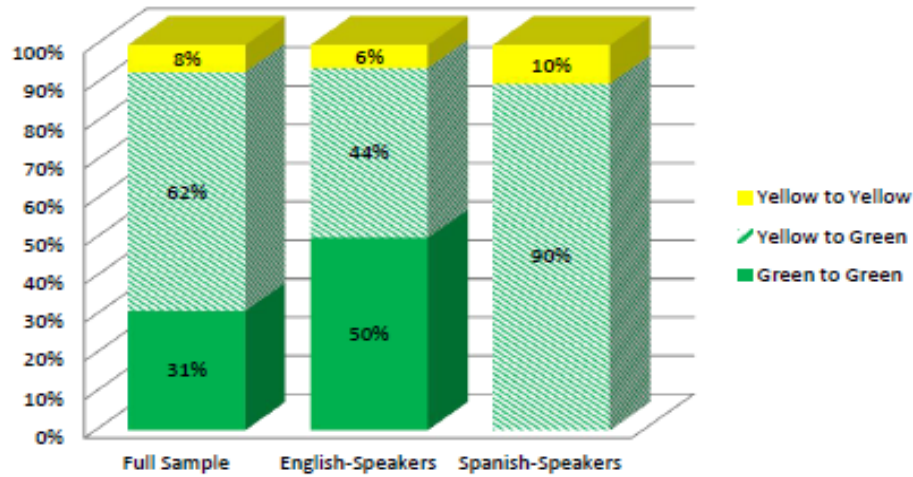
**Fig. 5**  
**Multi-Tier Classification Status**



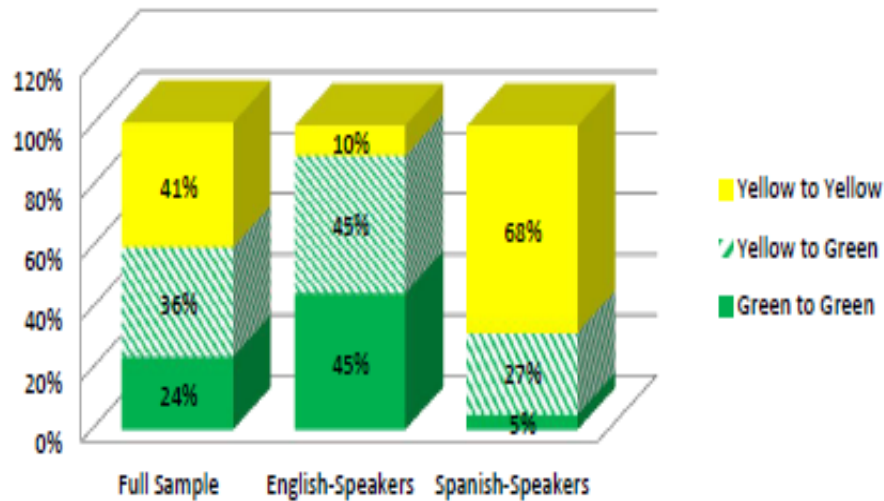
**Fig. 6**  
**Intensified Universal Classification Status**



**Fig. 7**  
**Multi-Tier Fall to Spring Classification Change**



**Fig. 8**  
**Intensified Universal Fall to Spring Classification Change**





# Implications & Lessons Learned

- For the majority of English speaking preschoolers in our sample, an intensive universal intervention appeared appropriate and effective for getting them “on track” for Kindergarten.
- The multi-tiered intervention was particularly salient for Spanish speaking children, for whom *intensive universal programming was insufficient to close the gap* by the end of preschool.



# Implications & Lessons Learned

- Support features essential for effective implementation:
  - Coaching
  - Administrative support
  - Time for coaching, planning
- Programmatic variations influence implementation:
  - Half day vs full day programming
  - Presence of evidence-based curriculum
  - Previous teacher professional development, experience
  - Availability of support staff



# For More Information



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