Building Capacity to Support Language Learning and Address the Word Gap for Infants and Young Children

Dale Walker and **Kathryn M. Bigelow**

Juniper Gardens Children's Project

Institute for Life Span Studies
University of Kansas

KU JUNIPER GARDENS CHILDREN'S PROJECT
Life Span Institute

TALK

Bridging the WORD GAP
National Research Network

Plans for this Session: Virtual Home Visiting Conference 2020

- Overview of the Word Gap and our research at the University of Kansas, Juniper Gardens Children's Project
- Description of the PC TALK language intervention
- Documenting impact of PC TALK with parents and early interventionists/educators
- Efforts to engage communities to bridge the word gap

Background Story of the Word Gap

Hart & Risley *Meaningful Differences in Everyday Experiences of Young American Children (1995) & Social World of Children Learning to talk (1999) (Brookes)* study of infants' and toddlers' language interaction in homes

Observed monthly in homes and looked at the interactions between parents and children from 7 months to 3 years old

Their work described how important talk and interaction is to the development of children

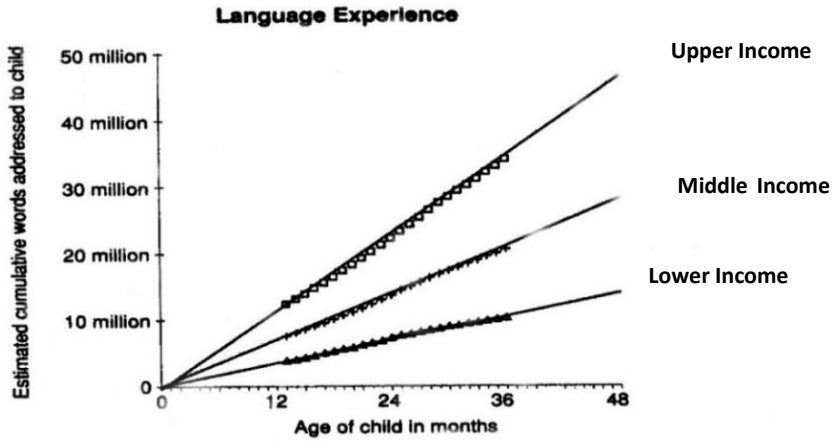
Gap in Amount of Talk Heard in Homes

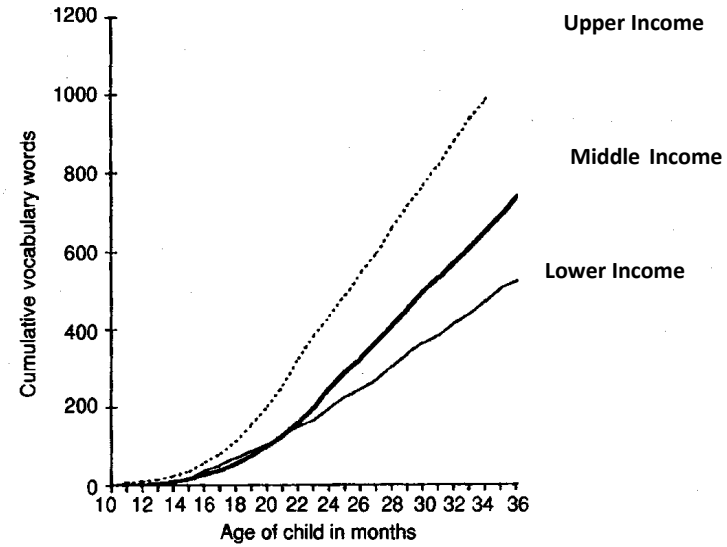
Children's experiences differed in terms of amount and quality of talk heard in their homes (600 to 3,000 words per hr.)

Some children heard as many as 45 million words, others, 13 million. An estimated difference of over 30 million words heard by age 4.

Children who had the largest vocabularies had parents who:

- Talked more often
- Interacted more
- Asked open-ended questions
- Used fewer prohibitions





(Hart & Risley, 1995, Brookes)

Differential Language Experiences During Infancy Impacted Later Schooling Outcomes

Followed children in kindergarten through 3rd grade, those early deficits in language interaction impacted development up through elementary school

- Understanding of language
- Spoken language
- Reading achievement
- School readiness

(Walker, Greenwood, Hart & Carta, 1994)

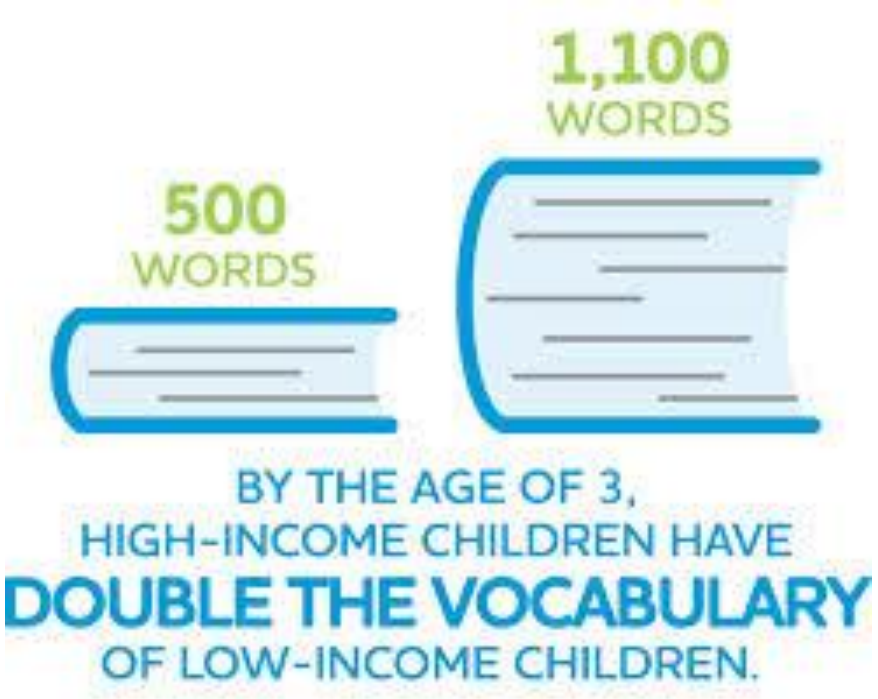
What is the "Word Gap" Why is it Important?

A disparity between the number and quality of words spoken as well as the types of messages conveyed BY ADULTS to children by age 3.

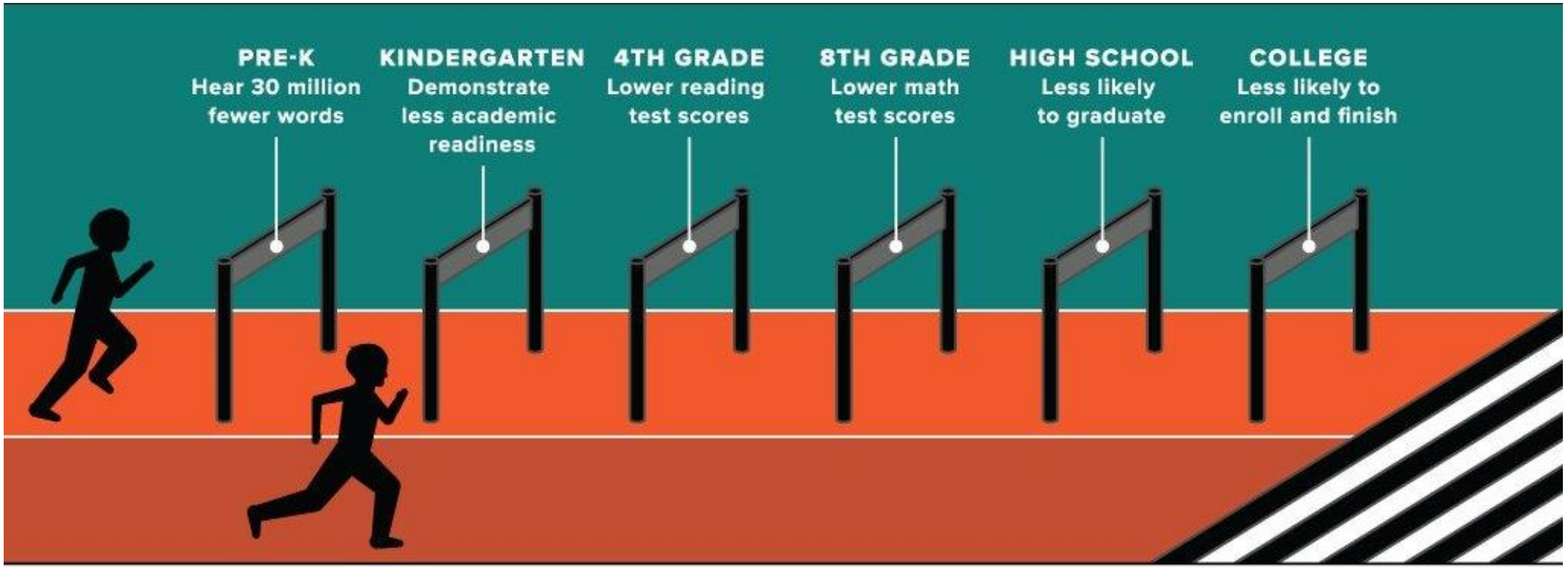
Children experiencing economic disadvantage or poverty are less likely to have the language-learning experiences of children from more advantaged backgrounds.

The size of a child's vocabulary at age 3 and the trajectory of vocabulary learning are strong predictors of literacy and later school success

Lower language trajectories may set in motion delays in reading and school readiness with profound, lifelong social and economic costs (Heckman, 2006, Shonkoff & Phillips, 2000, Warren & Walker, 2005).



Disparities in Experience Can Have Long-lasting Outcomes



Copyright 2017 Federal Reserve Bank of Minneapolis

What's important for the discussion today

This gap begins very early—long before children begin school.

We cannot wait until *kindergarten.*

We know a lot about what contributes to it.

We can prevent the gap but it is important to start early.

Some things that we know about poverty and child outcomes

1. The first signs of lower outcomes for children from low-income families are seen between 9 and 18 months of age.
2. The differences only grow larger as children get older.
3. While the gap can be reduced in the later grades, it's much more difficult than preventing it in the first place.

The Good News…Bad News

We know what it takes to bridge this gap.

We have years of descriptive and intervention research pointing to the specific types of behaviors that can reduce the word gap.

These are strategies that parents and family members and caregivers can do and embed into their everyday routines.

We also know that to see results – the strategies have to be used regularly, with fidelity.

These strategies are not always being used for those children who can benefit most.

Recognize that there are challenges with community-based interventions and maintaining parent and teacher engagement in intervention.

Overview and Evidence for Promoting Communication (PC TALK) Strategies

Based on early work of Hart & Risley (1992;1995) and later research around milieu and responsive teaching strategies, we developed PC TALK (Promoting Communication Tools for Advancing Language in Kids)

Studies we have conducted in child care and early intervention home visiting demonstrated effectiveness of PC strategies to increase child communication reviewed

Established importance of fidelity of intervention delivery to child outcomes and discuss ways to support implementation

Promoting Communication Strategies

Tools for Advancing Language in Kids (PC TALK)

TALK
Tools for Advancing Language in Kids

Evidence for Promoting Communication (PC TALK) Strategies

PC TALK strategies and associated tools can help build the capacity of parents and educators to promote infant/toddler communication

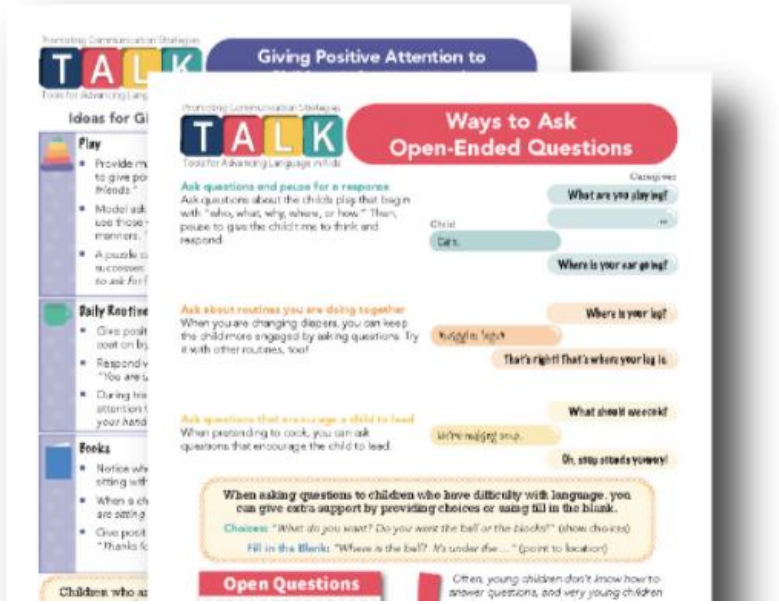
Studies in child care and home visiting and early intervention demonstrated effectiveness of PC strategies to increase child communication. For additional information http://www.talk.ku.edu/projects/

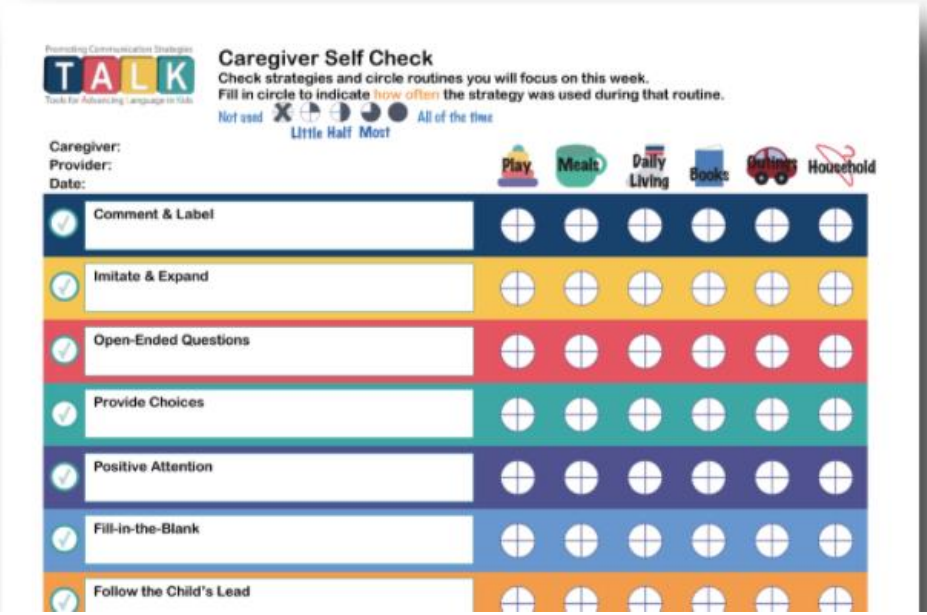
Established importance of fidelity of intervention delivery to child outcomes

PC TALK Website – Strategy Tools

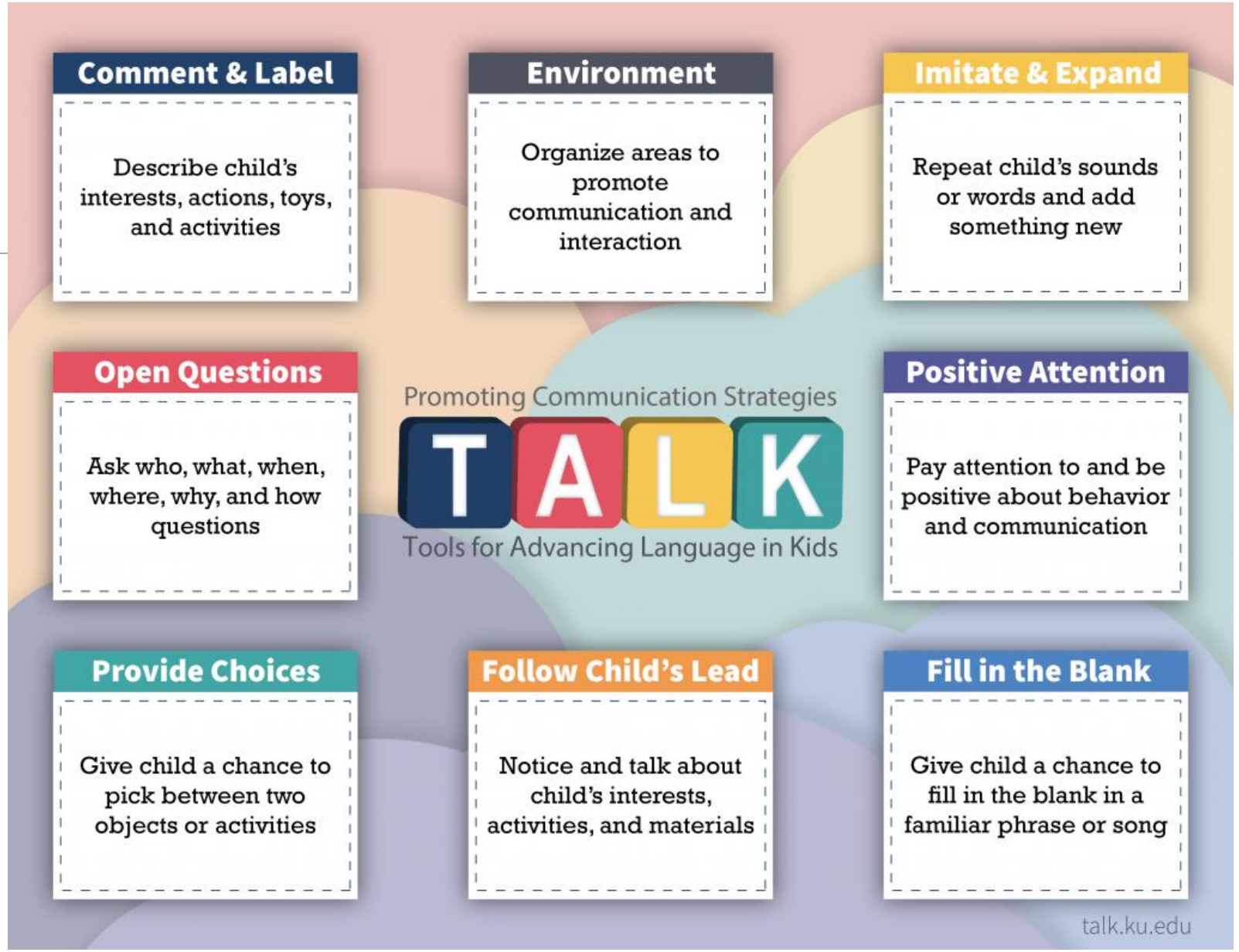
www.talk.ku.edu

Activity Cards | Manuals | Posters | Self Checks | Videos





PC TALK Poster

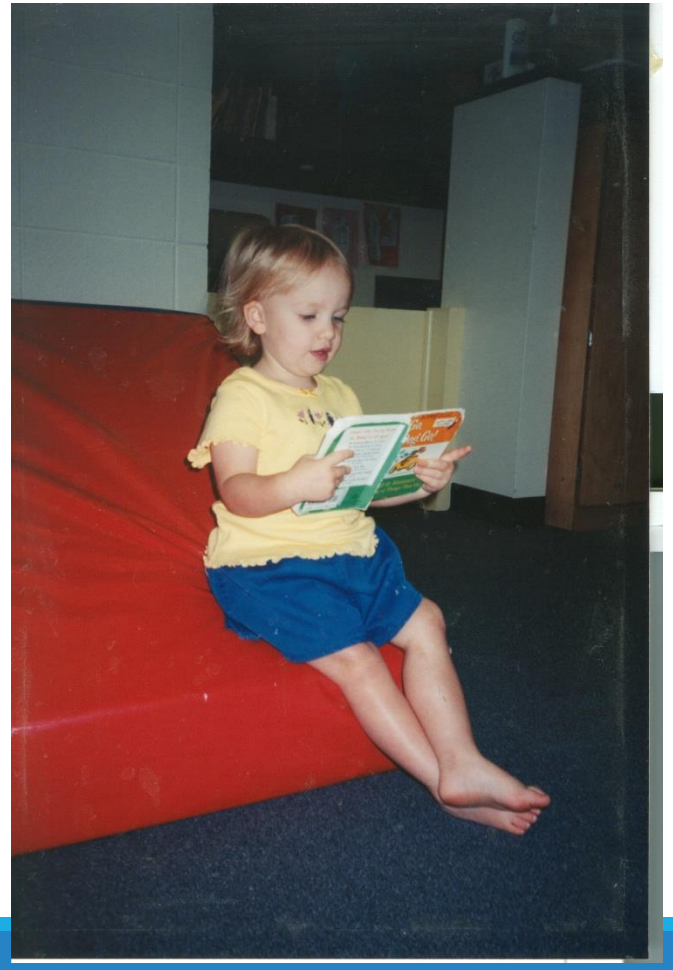


PC TALK Activity Cards

Arranging the Environment

Designing the environment to promote communication

- Having books to read in quiet, comfortable area
- Providing regular routines
- Displaying pictures at child's eye level
- Providing opportunities for exploring environment



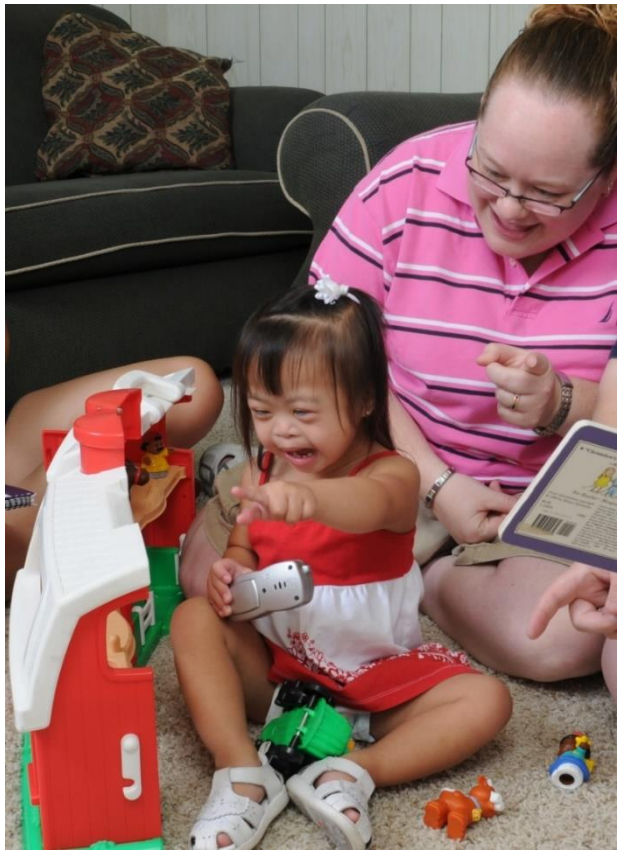
© 2004 University of Kansas

Following Child's Lead/Responsiveness

Noticing and talking about the child's interest, activity, or materials

Using child's interest to provide opportunities for communication

- Describe child's actions
- Allow child to direct activities
- Give choices



Commenting and Labeling

Describing actions, toys, activities

Children hear talk about actions and hear labels

- Comment on what the infant or toddler is playing with
- Talk about the pictures in a book

© 2004 University of Kansas

Imitating and Expanding

Imitating is repeating a child's vocalizations or words

- Repeat sounds or words child makes

Expanding is adding something new to what the child said

- Add to the child's statement by describing in a slightly more complex way

Asking Open-Ended Questions

Asking who, what, when, where, why questions that children can answer in multiple ways

- Ask questions related to child's play or interest
- Ask questions related to routines
- Pause after asking question, if no answer, fill in answer yourself

© 2004 University of Kansas

Promoting Communication: Time Delay/Fill in the Blank

Planning a delay during a predictable routine promotes communication

- Giving child the chance to fill in the blank in a song or common phrase they are familiar with
- Children practice talking
- Emphasizes child's success with words

© 2004 University of Kansas

Providing Positive Attention and Praise

Attending to and being positive about behavior and communication

- Positive attention creates opportunities for children to practice skills
- Playing and spending time with children gives positive attention
- Encourages future child communication

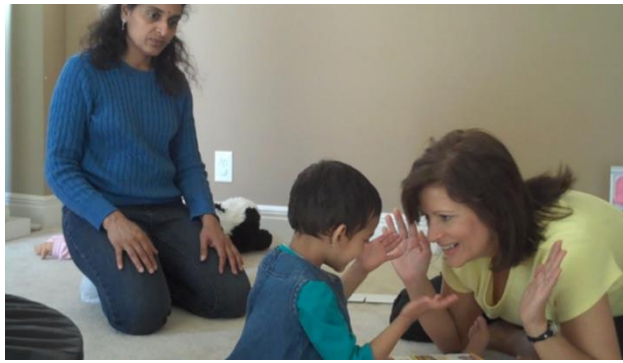
© 2004 University of Kansas

Providing Choices

Providing choices means the child will need to communicate their preferences

- Encourages communication
- Provide choices by rotating materials
- At snack time, present two options
- Give child options in play (toys/book reading)

How is the PC TALK Intervention Embedded into Home Visits?



Home visitors incorporate PC TALK Strategies in home activities to extend work toward achieving family language goals

Use across daily home routines (play, meals, bath, book reading, etc.)

Individualize to child's, families' needs

Intervention Coaches/home visitors support intervention delivery - observe and provide feedback to parents on their implementation of strategies

Graphs shared with parents to provide feedback on use of PC TALK Strategies

Coach, home visitor, and Parent Self-Checks used to self-monitor, prompt discussion

Documenting Strategy Use and Progress in Child Communication

Early intervention staff/ coach reviews parent and provider checklists with parents or teachers and shares graphs from intervention fidelity observations.

Measuring Intervention Delivery
PC Observation (PC-Obs) App

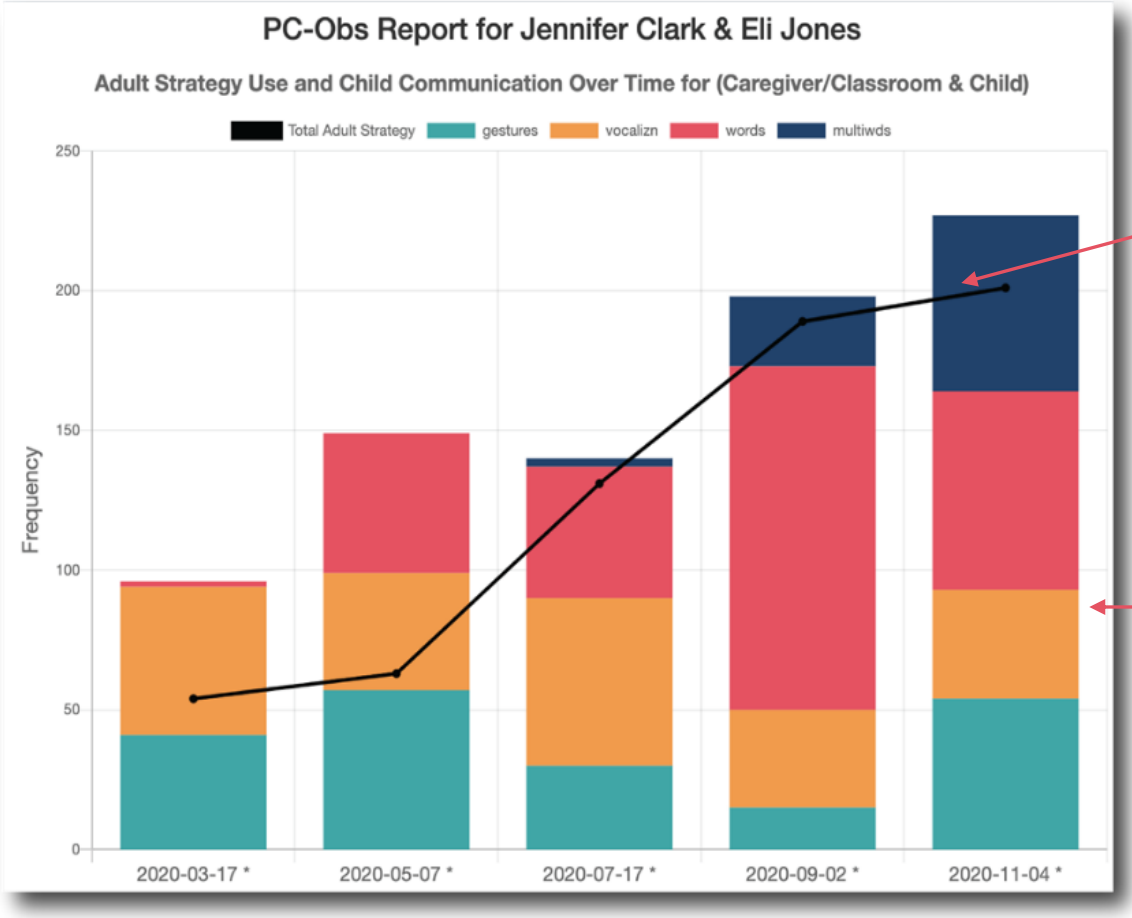
Providers use a tablet or phone (Android/iOS) to collect data on adult strategy use, child communication, and environment during daily activities.

Data are uploaded to a web dashboard, where home visitors and parents can view summary graphs.

PC-Obs Data Dashboard

PC-Obs Reports provide you with data to provide feedback and support parents in reflecting on their practice

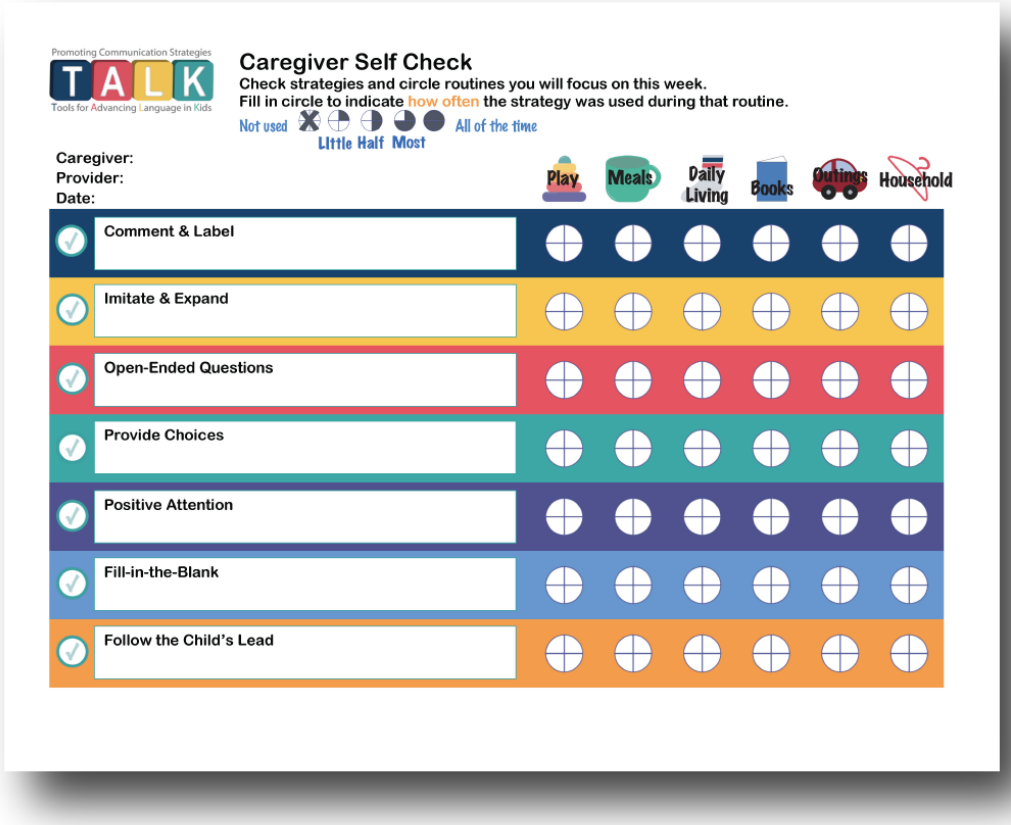
Showing parent and child data together helps to reinforce the link between parent strategy use and child communication



Line shows Adult Strategy use

Bars show Child Communication

Caregiver Self Check



Planning and self-monitoring tool

During visits, providers and parents create a plan:

- What strategies the caregivers will use
- In which routines will the caregiver use the strategies

During the week, caregivers practice the strategies in daily activities:

- Fill in the circle to indicate how often strategies were used during daily routines

Start small, and build upon progress – start with 1 or 2 strategies in 1 or 2 routines, and then build upon caregiver successes over time

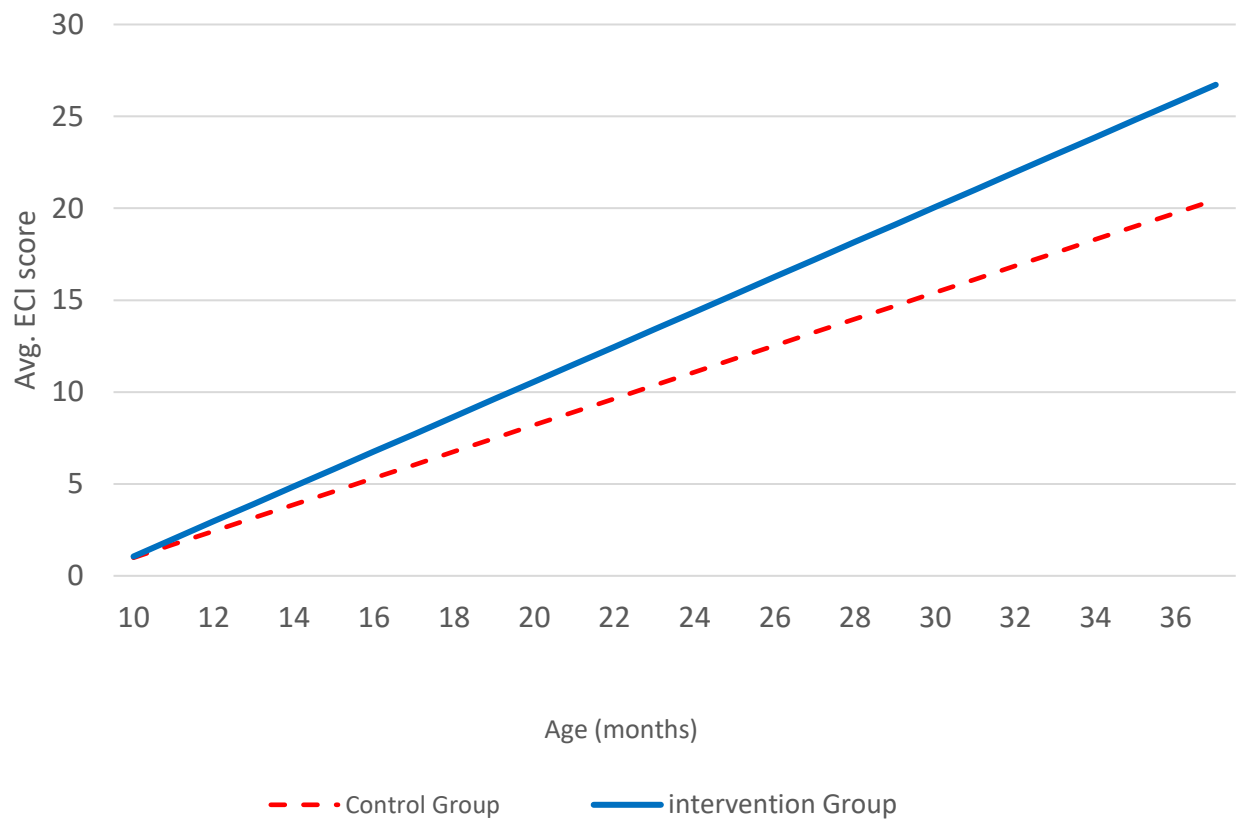
The Basics of PC TALK Sessions

Introduce	Introduce PC TALK and the Strategies • Tools: Videos, Poster, Handouts
Observe	Observe with PC-Obs and collect data • Tools: PC-Obs data, Self-check
Plan	Plan together on which strategy or strategies caregivers will focus on first, and in which routines • Tools: Activity Cards, Self-check
Review	Review progress and add new strategies and routines over time and as child communication grows • Tools: PC-Obs, Self-Check, Handouts, Poster, Activity Cards

Translational Research-Practice Partnership

- 3 early learning schools that are part of the Educare Learning Network, serving children in EHS/HS from economically disadvantage backgrounds together with researchers
- Demonstrate the effectiveness of implementing a naturalistic language intervention to build the capacity of teachers and parents to support children's language learning with 145 infants through preschool-aged children and 34 families in a feasibility study.

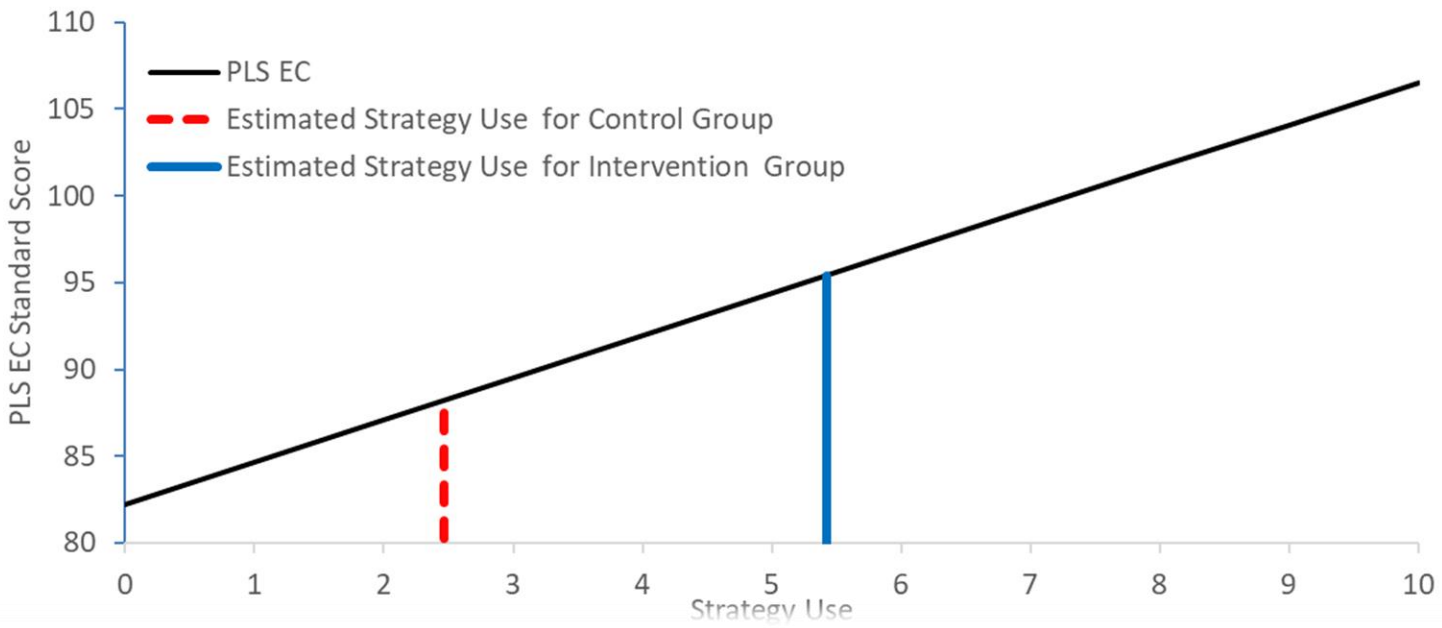
PC Intervention Use Related to Growth on the Early Communication Indicator IGDI



Increases in caregiver's PC strategy use associated with greater child communication growth on the ECI.

With increased use of the strategies, children were more likely to communicate at a higher rate by 36 months compared to children in Control group.

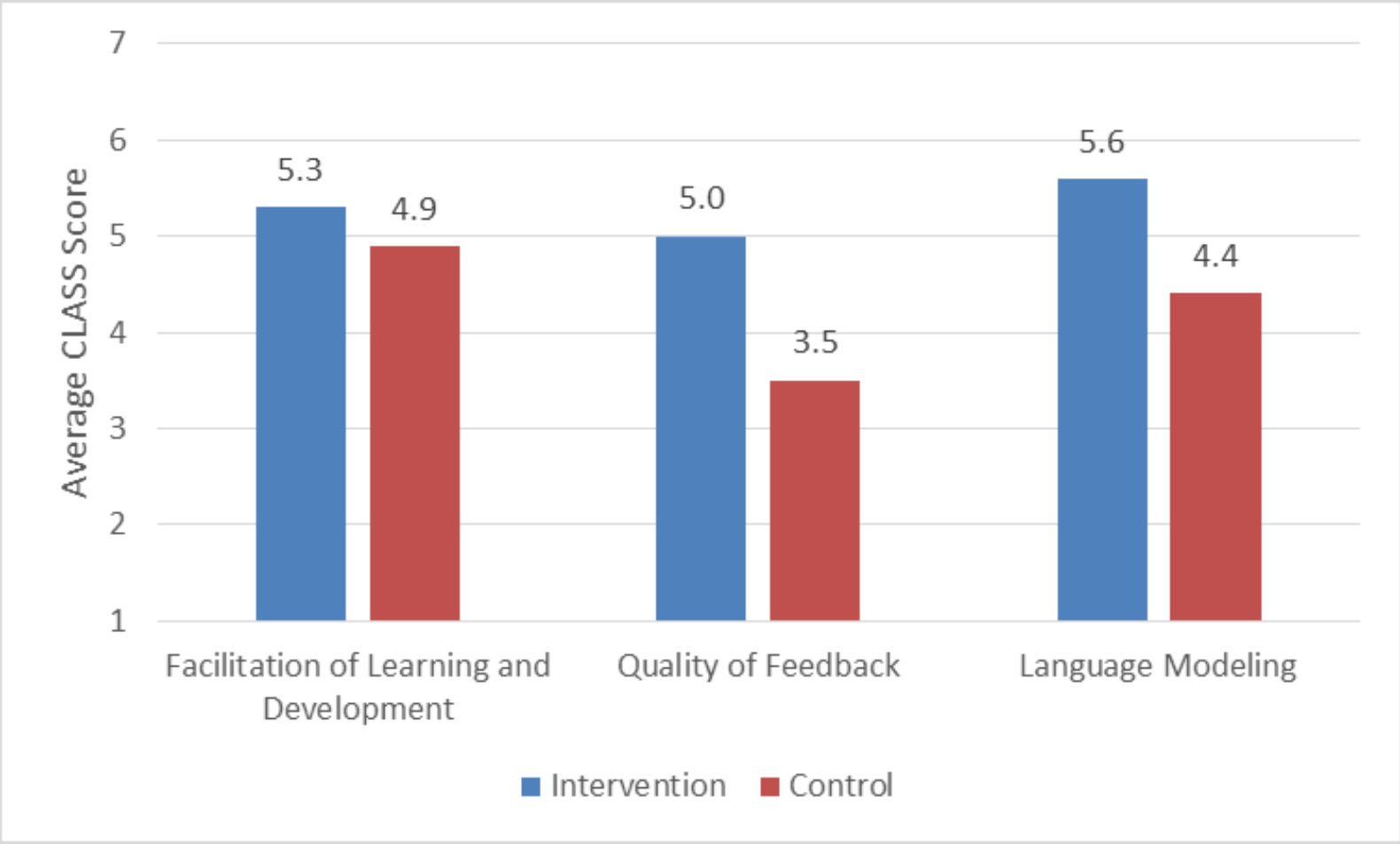
PC Intervention Use Influence on Preschool Language Scale (PLS)



Caregiver's level of strategy use was found to have a positive influence on the PLS expressive communication.

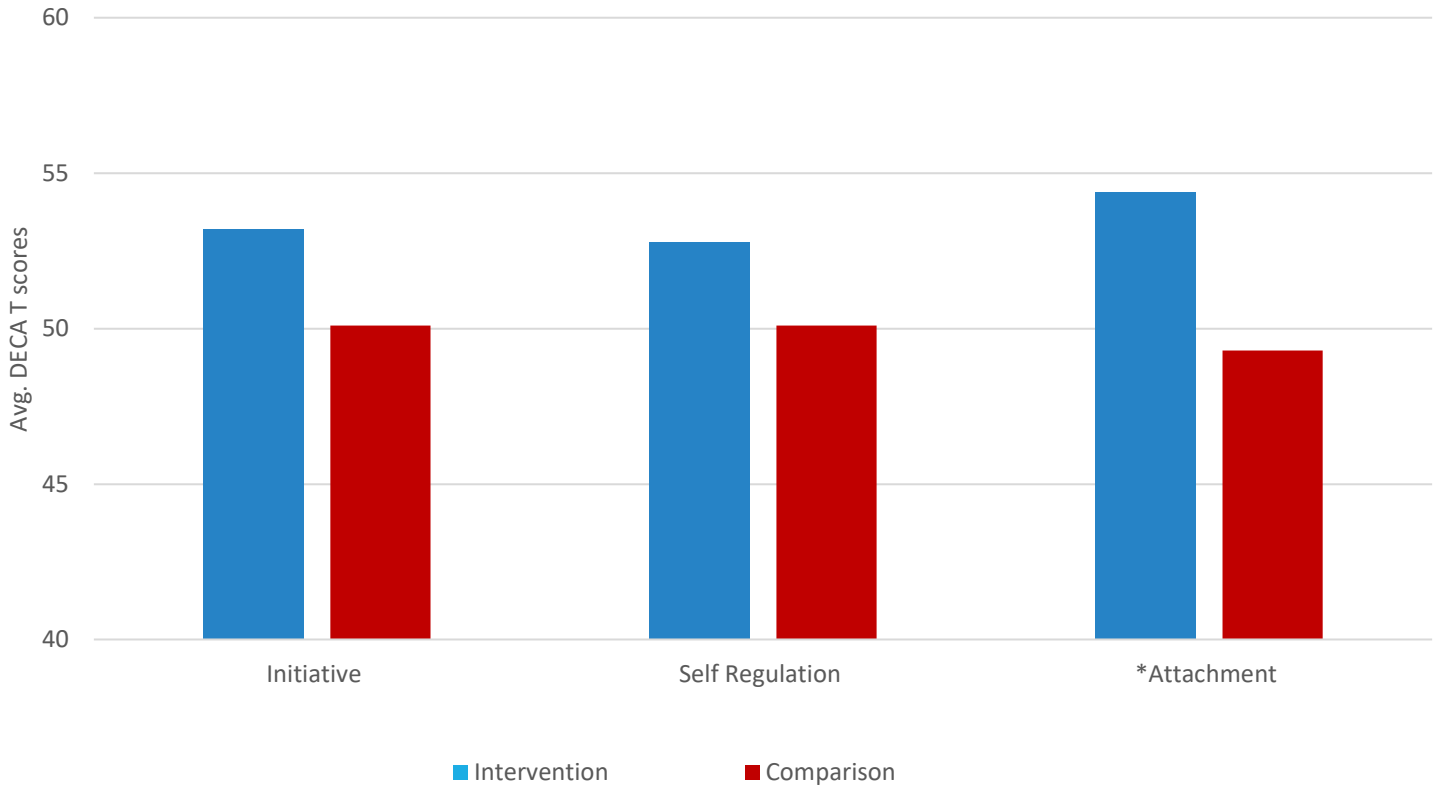
The PC TALK intervention led to more strategy use by caregivers which, in turn, led to a significant difference in the PLS expressive communication standardized score for the Intervention group compared to the Control group.

CLASS Scores for Early Education/Child Care



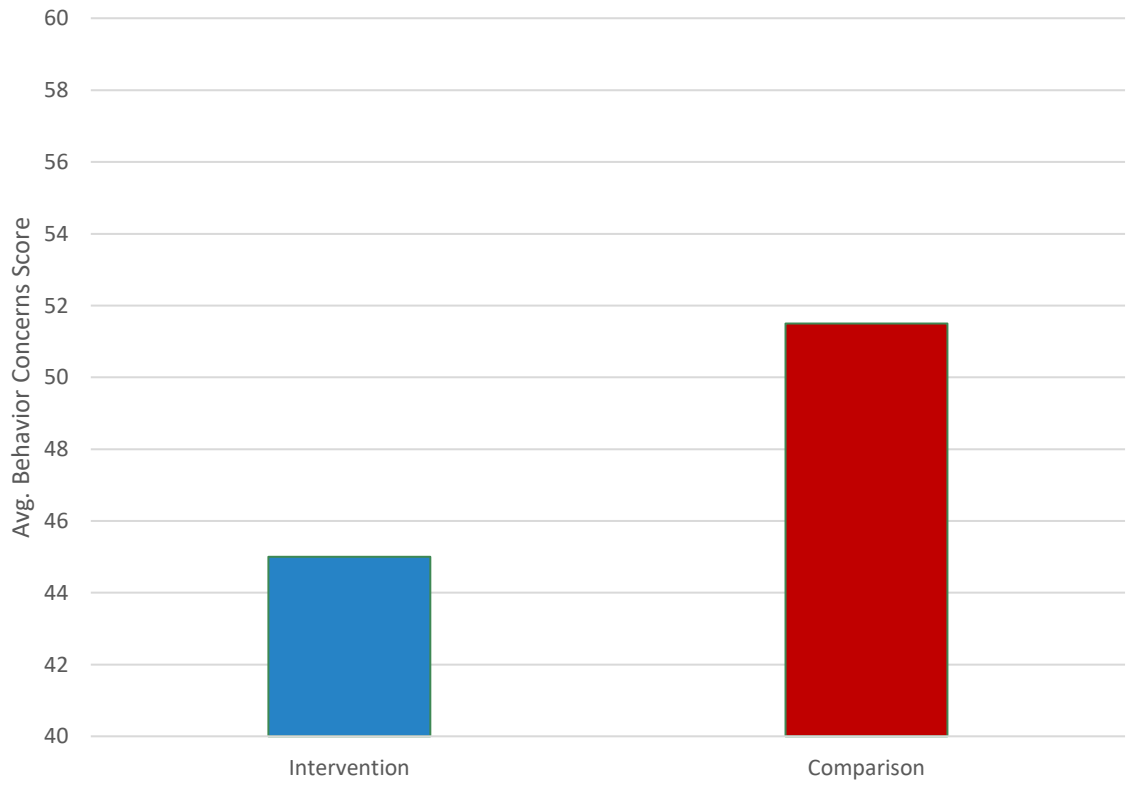
Intervention and Control Classrooms on the Toddler CLASS scales related to language. Across the constructs related to supporting language, differences were observed between the Intervention and Control Groups.

Devereux Early Childhood Assessment (DECA)



Children in the Intervention whose parent's learned about the intervention strategies in parent meetings scored higher on 3 DECA scales compared to children in the Comparison group whose parents did not attend the meetings.

Level of Teacher-Reported Behavioral Concerns for Intervention and Comparison Group Children



Children whose parents attended monthly parent meetings addressing the word gap in a parenting group and practiced using the PC intervention strategies, had fewer behavioral concerns on the DECA than comparison children from the same classrooms.

Model Demonstration Center for Promoting Language and Readiness in Early Childhood

Project to build the capacity of parents and educators to promote communication skills of 166 infants and toddlers with special needs across 3 EI programs.

Children who received higher rates of PC Strategies from their parents were more likely to have increases in PLS standard scores over time and ECI progress monitoring.

PLS scores were likely to decline for those receiving lower rates of adult talk.

Project Engage: Text messaging increases parent' use of PC TALK

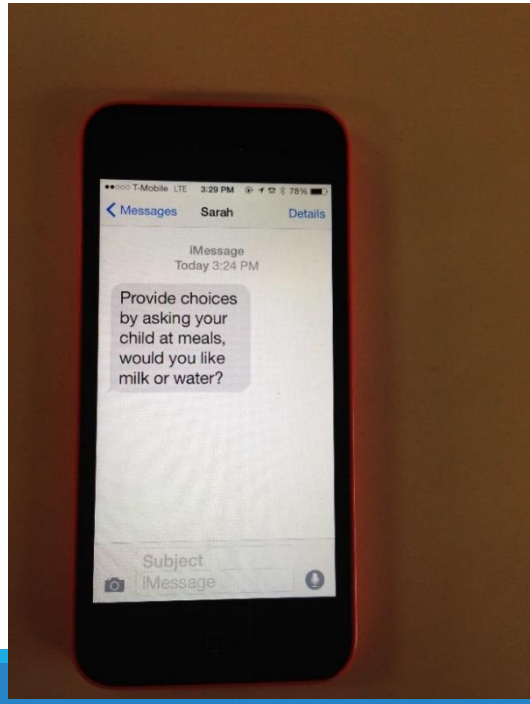
To promote parent engagement, we examined the impact of text messaging on parent use of PC Strategies

- Randomized study in rural and urban EHS and Part C, with 150 children and their parents, and 50 home visitors

Significant relationship between text message rate and parent use of PC Strategies

- Text messaging improved parent use of the strategies, which led to increases in children's expressive communication
- On average, with one more text sent, the parents used 3.33 more PC Strategies

Text messages helped to support parent engagement in the intervention, and strategy use



Bigelow, K. M., Walker, D., Jia, P., Irvin, D., & Turcotte, A., (2020). Text messaging as an enhancement to home visiting: Building parents' capacity to improve child language-learning environments. *Early Childhood Research Quarterly, 51*(2), 416-429. https://doi.org/10.1016/j.ecresq.2019.12.010

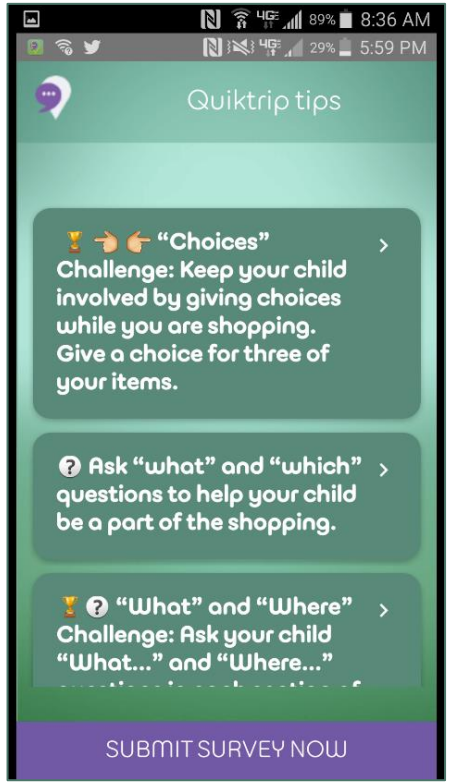
Talk Around Town App

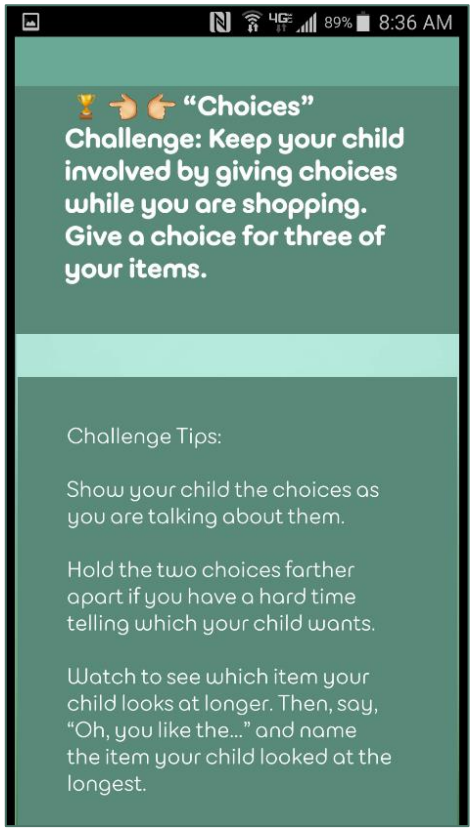
Kathy Bigelow, Dwight Irvin, Amy Turcotte,
Juniper Gardens Children's Project
And Nick Eastwood-Tallmon
http://talkaroundtown.waypoint-platform.com/

Delivers real-time, location specific tips and reminders to help parents increase the quantity and quality of talk to children.

Uses GPS technology on smartphones to deliver tips while visiting community settings—stores, libraries, parks.

Early childhood programs providers access a web dashboard to view families' outing data, and parent responses to a brief in-app survey.





The key goals of PC TALK

Intervention developed to assist early learning and intervention programs in becoming platforms for bridging the word gap

Designed so that intervention can be intentionally embedded into daily routines to increase support for children's language learning

Document intervention by generating graphs and reports to provide feedback to interventionists and parents

PC TALK was designed to be flexible and align with existing home visiting and child care curricula

Make a measurable difference in child language outcomes

The Bridging the Word Gap Community Action Plan (BWG-CAP) is a guide to engage all sectors of the community toward actions that promote parent-child rich language interactions so that children are ready for future academic success.

Community Action Planning Guide

- The BWG online Community Check Box Evaluation System is a proven tool from documenting a community's progress in implementing their action plan.
- The system documents progress completing action items contained in their Community Action Plan.

Getting Started

Please visit our websites to access materials and the tools to get started

TALK

talk.ku.edu

Bridging the WORD GAP National Research Network

bwg.ku.edu

For inquiries and to use PC TALK please contact:

Dr. Dale Walker walkerd@ku.edu Dr. Kathryn Bigelow kbigelow@ku.edu
Amy Turcotte aturcotte@ku.edu

Juniper Gardens Children's Project
444 Minnesota Ave. Suite 300
Kansas City, KS 66101
(913) 321-3143
http://www.talk.ku.edu/
www.bwgresnet.ku.edu

The work presented here was supported in part by the USDE, OSEP Grant # H326MO70005 (Model Demonstration Center for Promoting Communication and Literacy Readiness), Health Resources and Services Administration (HRSA) U.S. Department of Health and Human Services (HHS) # R62MC24946 (Project Engage), the Buffett Early Childhood Fund (Educare Acceleration Partnership to Bridge the Word Gap), the Bridging the Word Gap Research Network HRSA Award UA6MC27762, and the Kansas Intellectual and Developmental Disabilities Research Center, NIH Grant # HD002528, Institute for Life Span Studies, University of Kansas, and by the Institute of Education Sciences, U.S. Department of Education, through Grant R324A190223 to University of Kansas. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education. This information and conclusions are those of the authors and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government or other agencies.

We acknowledge our research collaborators from Juniper Gardens Children's Project, especially Amy Turcotte, Gabriela Guerrero, and the Bridging the Word Gap Research Network Leadership Team. We also thank the many community partners who have supported this work over the years, especially Project Eagle/Educare. Special appreciation is extended to the participating families, home visitors, teachers, staff and children.

Positive Attn & Praise slide: Screenshot of Dj Pryor and his son Kingston bonding over US series, Empire. Picture: NikiSpryor/Facebook

This material is the property of the authors and may be used for training purposes only with permission. Please contact the authors for further information.
(All rights reserved; Juniper Gardens Children's Project)