



**Promoting Communication
Tools for Advancing Language in Kids**

Promoting Communication Observation System (PC-Obs)

The Promoting Communication Observation (PC-Obs) System mobile app and data dashboard are used to document caregiver PC TALK intervention use.

Using the mobile app, adult use of the PC TALK strategies is measured concurrently with child communication during naturalistic daily activities in childcare or home settings. These data, when summarized, allow us to document intervention delivery, provide data-based feedback, and monitor progress over time.

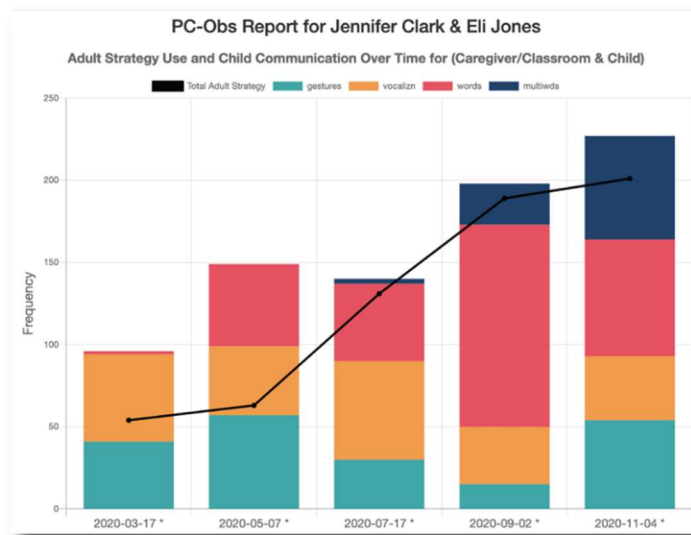
PC-Obs captures a real-time frequency sample of parent-child interaction. Time intervals may be selected as desired by research team, but observation length is typically 15-min. Observations are typically conducted by early childhood professionals (e.g., classroom coaches, early intervention providers, home visitors) every 2 to 3 months or on a schedule determined by research partners. The PC-Obs app is developed for Android and IOS (technical and user manual available upon request).



The online PC-Obs data dashboard generates graphs and tables that show adult strategy use and child communication over time. Summarized data include adult strategy use, other adult talk, negative adult talk, and child communication. If being used to inform intervention delivery, the graphs may be shared with teachers, parents, or other care providers.

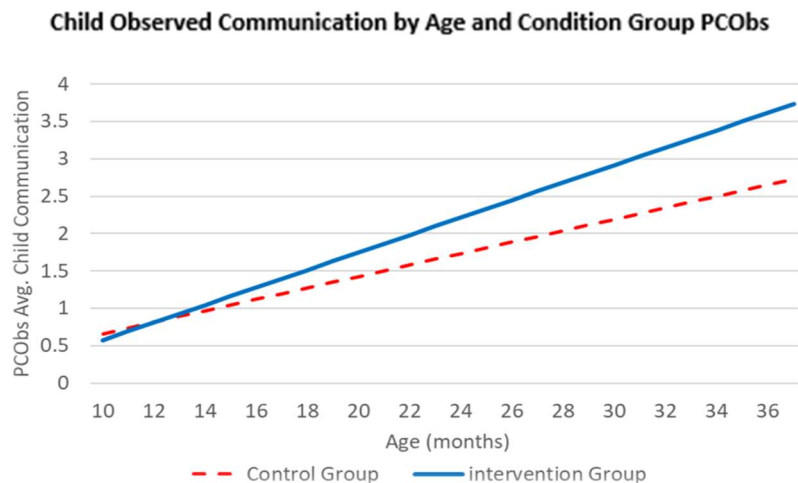
Criterion validity correlations between the adult’s use of communication strategies measured by the Fidelity Observation and the

Listening and Talking items from the *Infant-Toddler Environment Rating Scale* (Harms, Cryer, & Clifford, 1990) was $r = .42.$, and $.54$ to the *Preschool Language Scale-4* (PLS-4; Zimmerman et al, 2002). The PC-Obs is administered by staff trained to an 85% interobserver reliability criterion and rechecked annually or as decided upon by research partners. The PC-Obs training module can be conducted in workshops or remotely.



Example of outcomes from an Early Head Start study:

In this study across two enhanced center-based Early Head Start programs, multi-level growth curve modeling techniques, cross-sectional and descriptive analyses were employed. In bi-monthly observations of teachers' level of intervention use and concurrent child communication during classroom activities, teachers' rate of strategy use was significantly higher for teachers in Intervention classrooms compared to Control classrooms ($d = 1.41$) in a small RCT. Controlling for primary language, disability, and age, teachers' intervention use was positively related to observed child communication growth on a progress monitoring measure of communication ($d = 1.33$) (see figure below). The PC TALK intervention led to more strategy use by teachers, which, in turn, led to a significant difference in the PLS expressive communication scores ($d=0.57$). Level of intervention use by parents attending monthly meetings was also found to be associated with the rate of observed parent-child communication and child communication outcomes on a progress monitoring measure. Children whose parents used more of the PC TALK strategies had higher communication scores and fewer behavior concerns as rated by teachers. Taken together, the results show that when early educators use the intervention strategies in their classrooms and parents use the strategies learned through community meetings, infants and toddlers communicate more frequently and have greater communication growth as documented in adult-child observations and through standardized assessments. Implications for translational community-based intervention and policy will be discussed.



To download: <https://talk.ku.edu/pcobs/>

Walker, D., Bigelow, K.M., Turcotte, A.D., Reynolds, L.H., & Muehe, C. (2015). *Promoting Communication Observation System (PC-Obs): Measuring frequency of caregiver use of communication promoting strategies and child communicative behaviors*. Juniper Gardens Children's Project: Kansas City, KS.