Assessment of Speech and Language Environment as Part of Transdisciplinary Assessment
Sheryl Schaller, Mallene Wiggin, Susan Moore

Case Study 1: AN

Case Study 2: RVB

Rationale for Incorporating LENA
The PAL evaluation provides a snapshot of the child’s abilities that is supplemented with in-depth information from the parent interview and the home visit. LENA offers the PAL team a way to see if what they observed is consistent with the language skills and language environment of the child’s home. Research shows the language a child receives before the age of three is significantly and strongly associated with their subsequent language acquisition, cognitive development, school readiness, and academic achievement up to seven years later (Hart & Risley, 1992; Gunnewood, Thumann, Gillkerson, & LENA Workgroup, 2007; LENA Research Foundation, 2009; Rodriguez, & Verhulst, 2011). Additionally, the home language environment impacts a child’s vocabulary size and MLU (Hart & Risley, 1992; Walker, et al., 1994). Research shows parent training is an effective way to change the form and content of a child’s natural language environment and support the child’s language development (Kramarczuk, 2007; Wiggin, Galburt, Thompson, Gordon, & Yoshinaga-Itano, 2012).

Case Study 3: PBS

Conclusions:
• LENA was a valuable addition to the PAL assessment
• Family interview and transdisciplinary assessment are consistent with LENA findings
• Feedback from LENA allowed for:
  • In-depth conversation of specific strategies and times of the day parents could implement those strategies to support their child’s development
  • Visual representation of language use in the home
  • Provided families insight into times where they could maximize language opportunities
  • Strengthened findings of the PAL assessment based on the consistency of their child’s language in the assessment and the home environment
• Supported families enrollment in outside intervention services

References:
Moore, A., & Moore, S. M. (2016). Pathways to Assessment of Learning in a transdisciplinary play-based assessment model used the Speech, Language, Hearing Center (SLHC) at the University of Colorado Boulder. It incorporates “family-centered practices, culturally responsive planning, and transdisciplinary teams of specialists and family members” (Moore, Hyde-Smith, Pratt, McKnight, 2011). The team consists of the family, a speech language pathologist (SLP), an occupational therapist, a family resource consultant, an early childhood special educator, and four graduate SLP clinicians.

Objectives:
• Determine if LENA will become an additional key component of the PAL assessment
• Determine whether the family interview and transdisciplinary assessment is consistent with the LENA findings
• Determine ways that LENA allows for additional parent training of language strategies

Five Components:
• Family-Centered
• Play-Based
• Culturally-Responsive
• Transdisciplinary
• Environmental Reliability – LENA

Structure of the Assessment:
Family Interview: Three team members complete Pathways: A Child and Family Journey by guiding the family in an ethnographic interview and reviewing survey information completed independently by the family.
Pre-Assessment Planning Meeting: Using transdisciplinary collaboration, the team reviews the Pathways and completes the planning form to guide the assessment.
Assessment: Dynamic assessment occurs in a play-based setting with parent participation prior to parents transitioning to observing with the team.
Post-Assessment Information Sharing: Immediately following the assessment the parents and the team meet to discuss the assessment and determine developmentally appropriate next steps, strategies, and resources.

Introduction
Pathways to Assessment of Learning is a transdisciplinary play-based assessment model used the Speech, Language, Hearing Center (SLHC) at the University of Colorado Boulder. It incorporates “family-centered practices, culturally responsive planning, and transdisciplinary teams of specialists and family members” (Moore, Hyde-Smith, Pratt, McKnight, 2011). The team consists of the family, a speech language pathologist (SLP), an occupational therapist, a family resource consultant, an early childhood special educator, and four graduate SLP clinicians.

Background:

LENA Scores:
Adult Word Count 31%ile
Conversational Turns 6%ile
Child Vocalizations 2%ile
Child Specific Observations:
*RVB had an expressive vocabulary of 60 signs
**LENA was a valuable addition to the PAL assessment

Case Study 3: PBS

LENA Scores:
Adult Word Count 40%ile
Conversational Turns 7%ile
Child Vocalizations 1%ile
Child Specific Observations:
PBS has motor, speech, and language delays due to infantile spasms associated with West syndrome and STSIBI genetic deletion. At the time of the evaluation he had recently started rolling from his back to his stomach and from his stomach to his back. He was not independently sitting up. During the evaluation, he used gestures for the communication intentions of requesting for action, requesting for object, answering, and acknowledging. PBS wore the DLP on a day when he attended toddler group at SLHC. The recordings showed PBS vocalized less and has less diverse speech sounds than his same-age peers. These results confirmed information gained through the MacArthur-Bates CDI: Words & Gestures questionnaire, research about West syndrome, information from his current student clinician in toddler group, and the team’s observations during the evaluation. Together this information showed PBS expressive language is developmentally delayed and that he communicate mostly with his gestures than with vocalizations. Based on all of these sources of information, the team recommended developing consistent responses to indicate understanding, increase the consistency of expressive communication through use of a Big Mac and bringing objects to his midline, and increasing meaningful vocalizations (e.g., say “more” while eating).

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