

## Research Specific to: Naturalistic Teaching

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**Naturalistic teaching** includes interventions that occur during daily routine activities and capitalize on children's preferred interests, needs, and abilities as expressed in the moment. Children's initiations always begin naturalistic teaching interactions. Rather than creating specific times for communication intervention, teachers incorporate the strategies throughout the school day. Emphasis is on naturally occurring routines and interactions such as morning arrival, mealtime, play and leisure activities and personal care, as well as academic instructional routines. Naturalistic teaching is featured in Project Core as it encourages generalization of communication across contexts and communication partners.

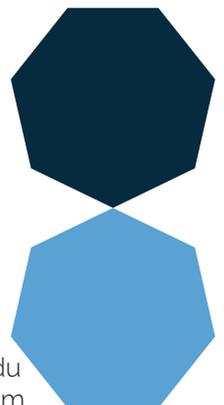
### Research

1. Romski, M. A. & Sevcik, R. A. (1996). *Breaking the speech barrier: Language development through augmented means*. Baltimore: Paul H. Brookes.

**Summary:** This was one of the first multi-year studies of adolescents with moderate to severe cognitive disabilities who had not yet been successful learning to communicate with symbols. The authors observed 13 students, their parents, and their school team for two years as they implemented the System for Augmenting Language (SAL) at home and school. SAL is one of the first systems to prioritize teaching device and symbol use through natural communication exchanges. This study demonstrated that embedding communication into everyday settings and activities, and encouraging, but not requiring students to use symbols, allowed students to learn to communicate with symbols across settings and communication partners.

2. Pindiprolu, S. S. (2012). A review of naturalistic interventions with young children with autism. *The Journal of International Special Education*, 12(1), 69-78.

**Summary:** This systematic review of the literature sought to understand the effect of naturalistic interventions. Children in all twelve studies reviewed were able to learn and use the targeted language skills, including core vocabulary (e.g. prepositions). They were better able to use these skills to communicate with new partners or in new settings than their peers who were taught in isolated contexts with highly structured, prompt dependent approaches. This study also demonstrated that the approaches that included turn-taking and giving children multiple examples of what they might communicate were shown to have the



biggest effect on students' ability to use these skills in new contexts with new communication partners.

3. Cowan, R.J. & Allen, K.D. (2007). Using naturalistic procedures to enhance learning in individuals with autism: A focus on generalized teaching within the school setting. *Psychology in the Schools, 44*(7), 701-715. doi: 10.1002/pits.20259

**Summary:** This article reviews the literature base for using naturalistic teaching with children with autism. Across the reviewed literature, naturalistic teaching begins by arranging the teaching environment to encourage interest as teaching interactions are initiated by the student. Results indicate that children who are engaged by materials that interest them and interact with adults who follow their lead by attributing meaning to their attempts to communicate, make gains in language that are generalized across context, activity, and communication partner. This article not only supports the premise that children with autism can learn in naturalistic contexts, but that when teachers use a naturalistic approach, their students will be able to use what they learn outside of the classroom.

4. Woods, J., Kashinath, S., & Goldstein, H. (2004). Effects of embedding caregiver-implemented teaching strategies in daily routines on children's communication outcomes. *Journal of Early Intervention, 26*, 175-193. doi:10.1177/105381510402600302

**Summary:** This study investigated the impact of training caregivers to use teaching strategies within their everyday play routines with their toddlers with developmental disabilities. Parents of four toddlers with developmental disabilities worked with interventionists to identify play routines they already engaged in with their children. Teaching strategies were individualized to match the parent's communication goals for their children, as well as their own preference based on their comfort at using a strategy. The children used the targeted communication skill more frequently when caregivers embedded teaching strategies into daily routines. These increases in communication also generalized to new play and care-taking routines.

5. Yoder, P. J., Kaiser, A. P., & Alpert, C. L. (1991). An exploratory study of the interactions between language teaching methods and child characteristics. *Journal of Speech and Hearing Research, 34*, 155-167. doi:10.1044/jshr.3401.155

**Summary:** This study explored the impact of different teaching approaches on language outcomes for children with developmental disabilities. Forty children enrolled in schools serving preschoolers with severe disabilities were randomly assigned to participate in either naturalistic or behavioral teaching sessions. Naturalistic teaching episodes occurred during small group activities and free play, while the behavioral teaching episodes occurred with children sitting one on one with a teacher at a small table. The analysis revealed that the children who began the study with the most restricted vocabulary, who did not initiate speech, had poor speech intelligibility, and who overall rarely spoke, made the most gains when they were taught using the naturalistic, rather than the behavioral approach. Specifically, these children made gains in vocabulary when instruction was embedded into conversations during familiar routines that were of high interest to the children.

## Further References:

### **Articles demonstrating that embedding naturalistic teaching principles into everyday classroom routines leads to increased language and communication for children and adolescents who use AAC systems.**

- Thiemann-Bourque, K. S., McGuff, S., & Goldstein, H. (2017). Training peer partners to use speech-generating device with classmates with autism spectrum disorder: Exploring communication outcomes across preschool contexts. *Journal of Speech, Language and Hearing Research, 60*, 2648-2662. doi: 1044/2017\_JSLHR-L-17-0049
- Romski, M. A., Sevick, R. A., Robinson, B., & Bakeman, R. (1994). Adults-directed communications of youth with mental retardation using the system for augmenting language. *Journal of Speech, Language, and Hearing Research, 37*, 617-628. doi:10.1044/jshr.3703.617
- Schepis, M. M., Reid, D. H., Behrmann, M. M., & Sutton, K. A. (1998). Increasing communication interactions of young children with autism using a voice output communication aid and naturalistic teaching. *Journal of Applied Behavior Analysis, 31*, 561-578. doi:10.1901/jaba.1998.31-561
- Yoder, P. J., Kaiser, A. P., Alpert, C., & Fischer, R. (1993). Following the child's lead when teaching nouns to preschoolers with mental retardation. *Journal of Speech, Language, and Hearing Research, 36*, 158-167. doi:10.1044/jshr.3601.158

### **Articles demonstrating that teaching in natural contexts increases the frequency of learning opportunities.**

- Dunst, C. J., Bruder, M. B., Trivette, C. M., & Hamby, D. W. (2005). Young children's natural learning environments: contrasting approaches to early childhood intervention indicate differential learning opportunities. *Psychological Reports, 96*, 231-234. doi:10.2466/pr0.96.1.231-234
- Dunst, C. J., Bruder, M. B., Trivette, C. M., Hamby, D., & Raab, M. (2001). Characteristics and consequences of everyday natural learning opportunities. *Topics in Early Special Education, 21*(2), 68-92. doi:10.1177/027112140102100202

### **Articles demonstrating that teaching language and communication in natural contexts allows children to gain skills they can use across contexts and communication partners.**

- Roper, N. & Dunst, C. J. (2003). Communication intervention in natural learning environments: Guidelines for practice. *Infants and Young Children, 16*(3), 215-226. doi:
- Trembath, D., Balandin, D., Togher, L., & Stancliffe, R. J. (2009). Peer-mediated teaching and augmentative and alternative communication for preschool-aged children with autism. *Journal of Intellectual and Developmental Disabilities, 34*, 173-186. doi: 10.1080/13668250902845210