

## Research Synthesis Points on Quality Inclusive Practices



In April, 2009, two national organizations working on behalf of young children—the Division for Early Childhood of the Council for Exceptional Children (DEC) and the National Association for the Education of Young Children (NAEYC)—completed two years of historic and collaborative work with the release of a joint position statement on inclusion<sup>1</sup>. This document provides brief descriptions and supporting references for the evidence-based and promising practices that support early childhood inclusion. These practices are organized into three major sections corresponding to the defining features of high quality early childhood inclusion as described in the joint position statement:

**Access**—removing physical barriers, providing a wide range of activities and environments, and making necessary adaptations to create optimal development and learning for individual children;

**Participation**—using a range of instructional and intervention approaches to promote engagement in play and learning activities, and a sense of belonging for every child; and

**Supports**—creating an infrastructure of systems-level supports for implementing high-quality inclusion.

Citations for each practice include best available research in the form of research reviews or syntheses or, when a summary of the research does not exist, the most recent and relevant individual studies evaluating specific practices. It should be noted that this document does not include an exhaustive list of existing research studies on every practice, nor do all promising practices have a supporting body of rigorous research evidence. This document may be used in a variety of contexts, including professional development, policy development, planning, advocacy, and grant writing.

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<sup>1</sup> DEC/NAEYC. (2009). *Early childhood inclusion: A joint position statement of the Division for Early Childhood (DEC) and the National Association for the Education of Young Children (NAEYC)*. Chapel Hill: The University of North Carolina, FPG Child Development Institute.

## Practices that Support Access

### Universal Design (UD)/Universal Design for Learning (UDL)

UD and UDL support access to early care and education environments through the removal of physical and structural barriers (UD) and the provision of multiple and varied formats for instruction and learning (UDL).<sup>2</sup>

National Center on Universal Design for Learning. UDL Guidelines - Version 2.0: Research Evidence. <http://www.udlcenter.org/research/researchevidence>

### Assistive Technology (AT)

AT interventions involve a range of strategies to promote a child's access to learning opportunities, from making simple changes to the environment and materials to helping a child use special equipment. Combining AT with effective teaching promotes the child's participation in learning and relating to others.<sup>3</sup>

Campbell, P. H., Milbourne, S., Dugan, L. M., & Wilcox, M. J. (2006). A review of evidence on practices for teaching young children to use assistive technology devices. *Topics in Early Childhood Special Education*, 26(1), 3-13.

Trivette, C. M., Dunst, C. J., Hamby, D. W., & O'Herin, C. E. (2010). Effects of different types of adaptations on the behavior of young children with disabilities. *Tots n Tech Research Institute. Research Brief* 4(1). [http://tnt.asu.edu/files/Adaptaqtions\\_Brief\\_final.pdf](http://tnt.asu.edu/files/Adaptaqtions_Brief_final.pdf)

## Practices that Support Participation

### Embedded Instruction and Other Naturalistic Interventions

Embedded instruction and intervention strategies address specific developmental or learning goals within the context of everyday activities, routines, and transitions at home, at school, or in the community.<sup>4</sup>

Snyder, P., Rakap, S., Hemmeter, M.L., McLaughlin, T., Sandall, S., & McLean, M. (2011). *Naturalistic instructional approaches in early learning*. Manuscript submitted for publication.

Trivette, C. M., Dunst, C. J., Hamby, D. W., & O'Herin, C. E. (2010). Effects of different types of adaptations on the behavior of young children with disabilities. *Tots n Tech Research Institute. Research Brief* 4(1). [http://tnt.asu.edu/files/Adaptaqtions\\_Brief\\_final.pdf](http://tnt.asu.edu/files/Adaptaqtions_Brief_final.pdf)

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<sup>2</sup> No research syntheses or published peer-reviewed studies are available for appraising the evidence related to universal design or universal design for learning prior to kindergarten. The citation included is a school-aged example.

<sup>3</sup> Winton, P. J., Buysse, V., Rous, B., Epstein, D., & Pierce, P. (2010). *CONNECT Module 5: Assistive technology interventions*. Chapel Hill: The University of North Carolina, FPG Child Development Institute, CONNECT: The Center to Mobilize Early Childhood Knowledge.

<sup>4</sup> Winton, P. J., Buysse, V., Turnbull, A., Rous, B., & Hollingsworth, H. (2010). *CONNECT Module 1: Embedded interventions*. Chapel Hill: The University of North Carolina, FPG Child Development Institute, CONNECT: The Center to Mobilize Early Childhood Knowledge.

## Scaffolding Strategies

Scaffolding strategies are structured, targeted approaches that can be used with children who require more intensive supports across a wide variety of teaching and learning contexts, and in combination with other approaches. Scaffolding strategies include modeling, response prompting, variations of prompting and modeling, peer supports, and corrective feedback.<sup>5, 6</sup>

- Chiara, L., Schuster, J. W., Bell, J. K., & Wolery, M. (1995). Small-group massed-trial and individually distributed-trial instruction with preschoolers. *Journal of Early Intervention, 19*, 203-217.
- Craig-Unkefer, L. A., & Kaiser, A. P. (2002). Improving the social communication skills of at-risk preschool children in a play context. *Topics in Early Childhood Special Education, 22*, 3-13.
- Gibson, A. N., & Schuster, J. W. (1992). The use of simultaneous prompting for teaching expressive word recognition to preschool children. *Topics in Early Childhood Special Education, 12*, 247-267.
- Girolametto, L., Weitzman, E., & Greenberg, J. (2004). The effects of verbal supports on small-group peer interactions. *Language, Speech, and Hearing Services in Schools, 35*, 254-268.
- Hawkings, S. R., & Schuster, J. W. (2007). Using a mand-model procedure to teach preschool children initial speech sounds. *Journal of Developmental and Physical Disabilities, 19*(1), 65-80.
- Kaiser, A. P., Hemmeter, M. L., & Ostrosky, M. M. (1996). The effects of teaching parents to use responsive interaction strategies. *Topics in Early Childhood Special Education, 16*, 375-406.
- Kaiser, A. P., Hester, P. P., & McDuffie, A. S. (2001). Supporting communication in young children with developmental disabilities. *Mental Retardation and Developmental Disability Research Reviews, 7*, 143-150.
- Kouri, T. A. (2005). Lexical training through modeling and elicitation procedures with late talkers who have specific language impairment and developmental delays. *Journal of Speech, Language, and Hearing Research, 48*, 157-171.
- Ostrosky, M., & Kaiser, A. P. (1995). The effects of a peer-mediated intervention on the social communicative interactions between children with and without special needs. *Journal of Behavioral Education, 5*(2), 151-171.
- Ross, D. E., & Greer, R. D. (2003). Generalized imitation and the mand: Inducing first instances of speech in young children with autism. *Research in Developmental Disabilities, 24*, 58-74.
- Walker, G. (2008). Constant and progressive time delay procedures for teaching children with autism: A literature review. *Journal of Autism and Developmental Disorders, 38*, 261-275.

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<sup>5</sup> Recent and relevant individual studies evaluating specific practices are listed because research reviews, syntheses, or summaries are not currently available.

<sup>6</sup> Buysse, V. (2011). Access, participation, and supports: The defining features of high-quality inclusion. *Zero to Three, 31*(4), 24-31.

## Tiered Models of Instruction/Intervention

Tiered models of instruction offer a framework that can be used in early childhood to help practitioners connect children's formative assessment results with specific teaching and intervention strategies.<sup>7, 8, 9, 10</sup>

- Burns, M. K., Appleton, J. J., & Stehouwer, J. D. (2005). Meta-analytic review of responsiveness-to-intervention research: Examining field-based and research-implemented models. *Journal of Psychoeducational Assessment*, 23(4), 381-394.
- Gersten, R., Beckman, S., Clarke, B., Foegen, A., Marsh, L., Star, J. R., & Witzel, B. (2009). Assisting students struggling with mathematics: Response to intervention (RTI) for elementary and middle schools (NCEE 2009-4060). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. Retrieved from <http://ies.ed.gov/ncee/wwc/publications/practiceguides/>
- Gersten, R., Compton, D., Connor, C. M., Dimino, J., Santoro, L., Linan-Thompson, S., & Tilly, W. D. (2008). Assisting students struggling with reading: Response to intervention and multi-tier intervention for reading in the primary grades. A practice guide. (NCEE 2009-4045). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. Retrieved from <http://ies.ed.gov/ncee/wwc/publications/practiceguides/>

## Practices Relating to Systems-Level Supports

### Professional Development (PD)

PD includes teaching and learning activities designed to support the acquisition of professional knowledge, skills, and dispositions related to inclusion as well as the application of this knowledge in practice. The content of the PD should include evidence-based practices that define high-quality early childhood inclusion.<sup>11, 12</sup>

- Cochran-Smith, M., & Zeichner, K. (2005). Executive summary. In M. Cochran-Smith & K. M. Zeichner (Eds.), *Studying teacher education: The report of the AERA panel on research and teacher education* (pp. 1-36). Mahwah, NJ: Erlbaum.
- Trivette, C. M., Dunst, C. J., Hamby, D. W., & O'Herin, C. E. (2009). Characteristics and consequences of adult learning methods and strategies. *Winterberry Research Synthesis*, 2(2). Retrieved from [http://www.signetwork.org/content\\_page\\_assets/content\\_page\\_66/adult%20learning%20Trivette%20and%20Dunst.pdf](http://www.signetwork.org/content_page_assets/content_page_66/adult%20learning%20Trivette%20and%20Dunst.pdf)

7 Buisse, V., & Peisner-Feinberg, E. (2010). Recognition & response: RTI for pre-k. *Young Exceptional Children*, 13(4), 2-13.

8 Hemmeter, M. L., Ostrosky, M., & Fox, L. (2006). Social and emotional foundations for early learning: A conceptual model for intervention. *School Psychology Review*, 35(4), 583-601.

9 Greenwood, C. R., Bradfield, T., Kaminski, R., Linas, M. W., Carta, J. J., & Nylander, D. (2011). The response to (RTI) approach in early childhood. *Focus on Exceptional Children*, 43(9), 1-22.

10 No research syntheses or published peer-reviewed studies are available for appraising the evidence of tiered models of instruction/intervention and to monitor progress in young children prior to kindergarten. The citations included are school-aged examples.

11 National Professional Development Center on Inclusion. (2008). *What do we mean by professional development in the early childhood field?* Chapel Hill: The University of North Carolina, FPG Child Development Institute, Author.

12 Because very few syntheses address professional development in early childhood, most of these citations are drawn from studies across different ages, disciplines, and content areas.

Wei, R. C., Darling-Hammond, L., Andree, A., Richardson, N., & Orphanos, S. (2009). *Professional learning in the learning profession: A status report on teacher development in the United States and abroad*. Dallas, TX: National Staff Development Council.

Whitehurst, G. J. (2002, March 5). Research on teacher preparation and professional development. Address to the White House Conference on Preparing Tomorrow's Teachers. Retrieved from <http://www2.ed.gov/admins/tchrqual/learn/preparingteachersconference/whitehurst.html>

Zaslow, M., Tout, K., Halle, T., Whittaker, J. E., & Lavelle, B. (2010). *Toward the identification of features of effective professional development for early childhood educators: Literature review*. Washington, DC: US Department of Education.

### **Models of Collaboration**

A variety of approaches have been developed to support ongoing communication and collaboration in conjunction with quality improvement and professional development in early childhood (and education more broadly). These include technical assistance, consultation, coaching, mentoring, collaborative problem-solving, and communities of practice/professional learning communities.<sup>13</sup>

Sheridan, S. M., Welch, M., & Orme, S. F. (1996). Is consultation effective? A review of outcome research. *Remedial and Special Education, 17*(6), 341-354.

### **Family-Professional Collaboration**

Family-professional collaboration builds opportunities for both relationship building and the active participation of parents and practitioners in achieving mutually agreed upon goals. The collaborative efforts build and strengthen family and professional capacity to provide or mediate the provisions of resources, supports, and services that ensure inclusion of children with disabilities in typical school and community activities.<sup>14,15</sup>

Dunst, C. J., & Trivette, C. M. (2009). Meta-analytic structural equation modeling of the influences of family-centered care on parent and child psychological health. *International Journal of Pediatrics, 2009*, 1-9.

Dunst, C. J., Trivette, C. M., & Hamby, D. W. (2007). Meta-analysis of family-centered helpgiving practices research. *Mental Retardation and Developmental Disabilities Research Reviews, 13*(4), 370-378.

Trivette, C. M., Dunst, C. J., & Hamby, D. W. (2010). Practices on parent-child interactions and child development. *Topics in Early Childhood Special Education, 30*(1), 3-19.

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<sup>13</sup> No research syntheses or published peer-reviewed studies are available for appraising evidence related to using models of collaboration with personnel serving young children prior to kindergarten. The citation included is a school-aged example.

<sup>14</sup> Dunst, C. J., Trivette, C. M., & Snyder, D. M. (2000). Family-professional partnerships: A behavioral science perspective. In M.J. Fine & R.L. Simpson (Eds.), *Collaboration with parents and families of children and youth with exceptionalities* (2nd ed., pp. 27-48). Austin, TX: Pro-Ed.

<sup>15</sup> Turnbull, A., & Turnbull, R. (2010). *Families, professionals, and exceptionality: Positive outcomes through partnerships and trust* (6th ed.). Upper Saddle River, NJ: Merrill Prentice Hall.

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<http://npdci.fpg.unc.edu>

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