

## ECTA Center Performance Checklists for the DEC Recommended Practices: Environment

Research Syntheses by the Checklists They Support

Environment Checklists referred to by number in the column below:

1. Natural Environment Learning Opportunities
2. Environmental Arrangements
3. Child Physical Activity
4. Environmental Adaptations
5. Assistive Technology

---

| Checklist # | Research Synthesis   |
|-------------|--|
| 3           | Ahn, S., & Fedewa, A. L. (2011). A meta-analysis of the relationship between children's physical activity and mental health. <i>Journal of Pediatric Psychology</i> . doi:10.1093/jpepsy/jsq107  |
| 5           | Alper, S., & Raharinirina, S. (2006). Assistive technology for individuals with disabilities: A review and synthesis of the literature. <i>Journal of Special Education Technology</i> , 21(2), 47-64. doi:10.1080/10400435.2012.723298  |
| 5           | Billington, C. (2016). How digital technology can support early language and literacy outcomes in early years settings: A review of the literature. Retrieved from <a href="http://www.literacytrust.org.uk/assets/0003/3409/How_digital_technology_can_support_early_language_and_literacy_outcomes_in_early_years_settings.pdf">http://www.literacytrust.org.uk/assets/0003/3409/How_digital_technology_can_support_early_language_and_literacy_outcomes_in_early_years_settings.pdf</a> |
| 2           | Boldemann, C., Blennow, M., Dal, H., Martensson, F., Raustorp, A., Yuen, K., & Wester, U. (2006). Impact of preschool environment upon children's physical activity and sun exposure. <i>Preventive Medicine</i> , 42, 301-308. doi:10.1016/j.ypmed.2005.12.006  |
| 3, 2        | Bower, J. K., Hales, D. P., Tate, D. F., Rubin, D. A., Benjamin, S. E., & Ward, D. S. (2008). The childcare environment and children's physical activity. <i>American Journal of Preventive Medicine</i> , 34(1), 23-29. doi:10.1016/j.amepre.2007.09.022  |
| 5           | Branson, D., & Demchak, M. (2009). The use of augmentative and alternative communication methods with infants and toddlers with disabilities: A research review. <i>AAC: Augmentative and Alternative Communication</i> , 25(4), 274-286. doi:10.3109/07434610903384529  |
| 3, 2        | Brown, H. E., Atkin, A. J., Panter, J., Wong, G., Chinapaw, M. J. M., & van Sluijs, E. M. F. (2016). Family-based interventions to increase physical activity in children: A systematic review, meta-analysis and realist synthesis. <i>Obesity Reviews</i> , 17(4), 345-360. doi:10.1111/obr.12362  |
| 5           | Burnett, C. (2010). Technology and literacy in early childhood educational settings: A review of research. <i>Journal of Early Childhood Literacy</i> , 10, 247-270. doi:10.1177/1468798410372154  |
| 3           | Campbell, K. J., & Hesketh, K. D. (2007). Strategies which aim to positively impact on weight, physical activity, diet and sedentary behaviours in children from zero to five years: A systematic review of the literature. <i>Obesity Reviews</i> , 8, 327-338. doi:10.1111/j.1467-789X.2006.00305.x  |
| 5           | 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. <i>Topics in Early Childhood Special Education</i> , 26, 3-13. doi:10.1177/02711214060260010101   |
| 4           | Campbell, P. H., Milbourne, S., & Wilcox, M. (2008). Adaptation interventions to promote participation in natural settings. <i>Infants and Young Children</i> , 21(2), 94-106. doi:10.1097/IYC.0000314481.16464.75.  |
| 5           | Chantry, J., & Dunford, C. (2010). How do computer assistive technologies enhance participation in childhood occupations for children with multiple and complex disabilities? A review of the current literature. <i>British Journal of Occupational Therapy</i> , 73, 351-365. doi:10.4276/030802210X12813483277107   |
| 1           | Chiarello, L. A., Banlett, D. I., Palisano, R. J., McCoy, S. W., Fiss, A. L., Jeffries, L., & Wilk, P. (2016). Determinants of participation in family and recreational activities of young children with cerebral palsy. <i>Disability and Rehabilitation</i> , 28(25), 2455-2468. doi:10.3109/09638288.2016.1138548  |
| 2           | Christian, H., Zubrick, S. R., Foster, S., Giles-Corti, B., Bull, F., Wood, L., . . . Boruff, B. (2015). The influence of the neighborhood physical environment on early child health and development: A review and call for research. <i>Health &amp; Place</i> , 33, 25-36. doi:10.1016/j.healthplace.2015.01.005  |

- 5 Clarke, B., & Svanaes, S. (2014). Tablets for schools: An updated literature review on the use of tablets in education. London: Family Kids and Youth. Retrieved from <http://maneelo.drealentejo.pt/site/images/Literature-Review-Use-of-Tablets-in-Education-9-4-14.pdf>
- 5 Desideri, L., Roentgen, U., Hoogerwerf, E.-J., & de Witte, L. (2013). Recommending assistive technology (AT) for children with multiple disabilities: A systematic review and qualitative synthesis of models and instruments for AT professionals. *Technology and Disability*, 25(1). doi:10.3233/TAD-130366
- 1 Dunst, C. J., Bruder, M. B., Trivette, C. M., Hamby, D., Raab, M., & McLean, M. (2001). Characteristics and consequences of everyday natural learning opportunities. *Topics in Early Childhood Special Education*, 21, 68-92. doi:10.1177/027112140102100202
- 1 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/pr.96.1.231-234
- 1 Dunst, C. J., Bruder, M. B., Trivette, C. M., & Hamby, D. W. (2006). Everyday activity settings, natural learning environments, and early intervention practices. *Journal of Policy and Practice in Intellectual Disabilities*, 3, 3-10. doi:10.1111/j.1741-1130.2006.00047.x
- 5, 4 Dunst, C. J., & Hamby, D. W. (2015). Research synthesis of studies to promote parent and practitioner use of assistive technology and adaptations with young children with disabilities. In D. L. Edyburn (Ed.), *Advances in special education technology (Vol. 1): Efficacy of assistive technology interventions* (pp. pp. 51-78). United Kingdom: Emerald Publishing.
- 1 Dunst, C. J., Raab, M., & Trivette, C. M. (2013). Methods for increasing child participation in interest-based language learning activities. *Everyday Child Language Learning Tools*, Number 4, 1-6. Retrieved from [http://www.puckett.org/CECLL/ECLLReport\\_7\\_LearnOps.pdf](http://www.puckett.org/CECLL/ECLLReport_7_LearnOps.pdf)
- 5 Dunst, C. J., Trivette, C. M., & Hamby, D. W. (2012). Assistive technology and the communication and literacy development of young children with disabilities. *CELLreviews*, 5(7), 1-13. Retrieved from [http://www.earlyliteracylearning.org/cellreviews/cellreviews\\_v5\\_n7.pdf](http://www.earlyliteracylearning.org/cellreviews/cellreviews_v5_n7.pdf)
- 1 Dunst, C. J., Trivette, C. M., Hamby, D. W., & Bruder, M. B. (2006). Influences of contrasting natural learning environment experiences on child, parent, and family well-being. *Journal of Developmental and Physical Disabilities*, 18, 235-250. doi:10.1007/s10882-006-9013-9
- 5 Dunst, C. J., Trivette, C. M., Hamby, D. W., & Simkus, A. (2013). Systematic review of studies promoting the use of assistive technology devices by young children with disabilities. *Practical Evaluation Reports*, 5(1), 1-32. Retrieved from [http://www.puckett.org/Practical%20Evaluation%20reports/CPE\\_Report\\_Vol5No1.pdf](http://www.puckett.org/Practical%20Evaluation%20reports/CPE_Report_Vol5No1.pdf)
- 1 Dunst, C. J., Valentine, A., Raab, M., & Hamby, D. W. (2013). Relationship between child participation in everyday activities and early literacy and language development. *CELLreviews*, 6(1), 1-16. Retrieved from [http://www.earlyliteracylearning.org/cellreviews/CELLreviews\\_v6\\_n1.pdf](http://www.earlyliteracylearning.org/cellreviews/CELLreviews_v6_n1.pdf)
- 1 Fiese, B. H., Tomcho, T. J., Douglas, M., Josephs, K., Poltrack, S., & Baker, T. (2002). A review of 50 years of research on naturally occurring family routines and rituals: Cause for celebration? *Journal of Family Psychology*, 16(4), 381-390. doi:10.1037/0893-3200.16.4.381
- 5 Floyd, K. K., Canter, L. L. S., Jeffs, T., & Judge, S. A. (2008). Assistive technology and emergent literacy for preschoolers: A literature review. *Assistive Technology Outcomes and Benefits*, 5, 92-102.
- 2 Godbey, G. (2009). *Outdoor recreation, health, and wellness: Understanding and enhancing the relationship*. Washington, DC: Resources for the Future.
- 3 Gordon, E. S., Tucker, P., Burke, S. M., & Carron, A. V. (2013). Effectiveness of physical activity interventions for preschoolers: A meta-analysis. *Research Quarterly for Exercise and Sport*, 84, 287-294. doi:10.1080/02701367.2013.813894
- 2 Henderson, K. E., Grode, G. M., O'Connell, M. L., & Schwartz, M. B. (2015). Environmental factors associated with physical activity in childcare centers. *International Journal of Behavioral Nutrition and Physical Activity*, 12, 43. doi:10.1186/s12966-015-0198-0
- 3 Hesketh, K. D., & Campbell, K. J. (2010). Interventions to prevent obesity in 0-5 year olds: An updated systematic review of the literature. *Obesity*, 18(Suppl. 1), S27-S35.
- 3, 2 Hinkley, T., Crawford, D., Salmon, J., Okely, A. D., & Hesketh, K. (2008). Preschool children and physical activity: A review of correlates. *American Journal of Preventive Medicine*, 34, 435-441.
- 3, 2 Hinkley, T., Teychenne, M., Downing, K. L., Ball, K., Salmon, J., & Hesketh, K. D. (2014). Early childhood physical activity, sedentary behaviors and psychosocial well-being: A systematic review. *Preventive Medicine*, 62, 182-192. doi:10.1016/j.ypmed.2014.02.007
- 5, 1 Isabelle, S., Bessey, F., Lawrence-Dragas, K., Blease, P., Shepherd, J., & Lane, S. (2002). Assistive technology for children with disabilities. *Occupational Therapy in Health Care*, 16(4), 29-51. doi:10.1300/J003v16n04\_03
- 2 Jansson, M. (2010). Attractive playgrounds: Some factors affecting user interest and visiting patterns. *Landscape Research*, 35(1), 63-81. doi:10.1080/01426390903414950

- 2, 1 Kemp, C., Kishida, Y., Carter, M., & Sweller, N. (2013). The effect of activity type on the engagement and interaction of young children with disabilities in inclusive childcare. *Early Childhood Research Quarterly*, 28, 134-143.
- 3, 2 Kreichauf, S., Wildgruber, A., Krombholz, H., Gibson, E. L., Vögele, C., Nixon, C. A., . . . Summerbell, C. D. (2012). Critical narrative review to identify educational strategies promoting physical activity in preschool. *Obesity Reviews*, 13(s1), 96-105. doi:10.1111/j.1467-789X.2011.00973.x
- 5 Lauricella, A. R., Blackwell, C. K., & Wartella, E. (2016). The "new" technology environment: The role of content and context on learning and development from mobile media. In R. Barr & D. N. Linebarger (Eds.), *Media exposure during infancy and early childhood* (pp. 1-23). Cham, Switzerland: Springer International Publishing.
- 2, 1 Lequia, J., Machalicek, W., & Rispoli, M. J. (2012). Effects of activity schedules on challenging behavior exhibited in children with autism spectrum disorders: A systematic review. *Research in Autism Spectrum Disorders*, 6, 480-492. doi:10.1016/j.rasd.2011.07.008
- 5 Light, J., & McNaughton, D. (2012). Supporting the communication, language, and literacy development of children with complex communication needs: State of the science and future research priorities. *Assistive Technology*, 24(1), 34-44. doi:10.1080/10400435.2011.648717
- 5 Lovato, S., & Waxman, S. R. (2016). Young children learning from touch screens: Taking a wider view. *Frontiers in Psychology*. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4947576/pdf/fpsyg-07-01078.pdf> doi:10.3389/fpsyg.2016.01078
- 3, 2 Mihaylov, S. I., Jarvis, S. N., Colver, A. F., & Beresford, B. (2004). Identification and description of environmental factors that influence participation of children with cerebral palsy. *Developmental Medicine and Child Neurology*, 46, 299-304.
- 5 Millar, D. C., Light, J. C., & Schlosser, R. W. (2006). The impact of augmentative and alternative communication intervention on the speech production of individuals with developmental disabilities: A research review. *Journal of Speech, Language, and Hearing Research*, 49, 248-264.
- 5 Mistrett, S. G., Hale, M. M., Diamond, C. M., Ruedel, K. L. A., Gruner, A., Sunshine, C., . . . McInerney, M. (2001). Synthesis on the use of assistive technology with infants and toddlers (birth through two). Retrieved from Washington, DC: Retrieved from [http://www.fctd.info/webboard/files/AIR\\_EI-AT\\_Report\\_2001.pdf](http://www.fctd.info/webboard/files/AIR_EI-AT_Report_2001.pdf)
- 3, 2 Mitchell, J., Skouteris, H., McCabe, M., Ricciardelli, L. A., Milgrom, J., Baur, L. A., . . . Dwyer, G. (2012). Physical activity in young children: A systematic review of parental influences. *Early Child Development and Care*, 182(11), 1411-1437. doi:10.1080/03004430.2011.619658
- 3, 2 Morgan, C., Novak, I., & Badawi, N. (2013). Enriched environments and motor outcomes in cerebral palsy: Systematic review and meta-analysis. *Pediatrics*, 132(3), e735-e746. doi:10.1542/peds.2012-3985
- 5 Nicolson, A., Moir, L., & Millsteed, J. (2012). Impact of assistive technology on family caregivers of children with physical disabilities: A systematic review. *Disability and Rehabilitation: Assistive Technology*, 7(5), 345-349. doi:10.3109/17483107.2012.667194
- 4 Østensjø, S., Carlberg, E. B., & Vollestad, N. K. (2003). Everyday functioning in young children with cerebral palsy: Functional skills, caregiver assistance, and modifications of the environment. *Developmental Medicine and Child Neurology*, 45, 603-612. doi:10.1017/S0012162203001105
- 5 Østensjø, S., Carlberg, E. B., & Vøllestad, N. K. (2005). The use and impact of assistive devices and other environmental modifications on everyday activities and care in young children with cerebral palsy. *Disability and Rehabilitation*, 27, 849-861.
- 5 Palaiologou, I. (2016). Children under five and digital technologies: Implications for early years pedagogy. *European Early Childhood Education Research Journal*, 24(1), 5-24. doi:10.1080/1350293X.2014.929876
- 1 Palisano, R. J., Chiarello, L. A., King, G. A., Novak, I., Stoner, T., & Fiss, A. (2012). Participation-based therapy for children with physical disabilities. *Disability and Rehabilitation*, 34, 1041-1052. doi:10.3109/09638288.2011.628740
- 2 Palisano, R. J., Tieman, B. L., Walter, S. D., Bartlett, D. J., Rosenbaum, P. L., Russell, D., & Hanna, S. E. (2003). Effect of environmental setting on mobility methods of children with cerebral palsy. *Developmental Medicine & Child Neurology*, 45(2), 113-120. doi:10.1111/j.1469-8749.2003.tb00914.x
- 2, 1 Petrenchik, T. M., & King, G. A. (2011). Pathways to positive development: Childhood participation in everyday places and activities. In S. Bazyk (Ed.), *Mental health promotion, prevention, and intervention with children and youth: A guiding framework for occupational therapy* (pp. 71-94). Bethesda, MD: AOTA Press
- 1 Rosenberg, L., Bart, O., Ratzon, N. Z., & Jarus, T. (2013). Personal and environmental factors predict participation of children with and without mild developmental disabilities. *Journal of Child and Family Studies*, 22(5), 658-671. doi:10.1007/s10826-012-9619-8
- 3, 2 Sallis, J. F., Prochaska, J. J., & Taylor, W. C. (2000). A review of correlates of physical activity of children and adolescents. *Medicine & Science in Sports & Exercise*, 32(5), 963-975. doi:10.1097/00005768-200005000-00014
- 5 Schlosser, R. W., & Sigafoos, J. (2006). Augmentative and alternative communication interventions for persons with developmental disabilities: Narrative review of comparative single-subject experimental studies. *Research in Developmental Disabilities*, 27(1), 1-29. doi:10.1016/j.ridd.2004.04.004

- 1 Spagnola, M., & Fiese, B. H. (2007). Family routines and rituals: A context for development in the lives of young  
children. *Infants and Young Children*, 20(4), 284-299. doi:10.1097/01.IYC.0000290352.32170.5a
- 2 Sugiyama, T., Okely, A. D., Masters, J. M., & Moore, G. T. (2012). Attributes of child care centers and outdoor play  
areas associated with preschoolers' physical activity and sedentary behavior. *Environment and Behavior*, 44(3),  
334-339. doi:10.1177/0013916510393276
- 2 Tremblay, L., Boudreau-Larivière, C., & Cimon-Lambert, K. (2012). Promoting physical activity in preschoolers: A  
review of the guidelines, barriers, and facilitators for implementation of policies and practices. *Canadian  
Psychology/Psychologie Canadienne*, 53(4), 280-290. doi:10.1037/a0030210
- 1 Trivette, C. M., Dunst, C. J., & Hamby, D. (2004). Sources of variation in and consequences of everyday activity  
settings on child and parenting functioning. *Perspectives in Education*, 22(2), 17-35. Retrieved from  
<http://search.sabinet.co.za/pie/>.
- 4 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. *Research Brief (Tots N Tech Research Institute)*, 4(1), 1-26. Retrieved  
from [http://www.puckett.org/returns\\_investments\\_tots\\_n\\_tech.php](http://www.puckett.org/returns_investments_tots_n_tech.php)
- 1 Trivette, C. M., Dunst, C. J., Simkus, A., & Hamby, D. W. (2013). Methods for increasing child participation in  
everyday learning opportunities. *Everyday Child Language Learning Reports*, Number 7, 1-7. Retrieved from  
[http://www.cecl.org/download/ECLLReport\\_7\\_LearnOps.pdf](http://www.cecl.org/download/ECLLReport_7_LearnOps.pdf)
- 2, 1 Wachs, T. D. (1999). Celebrating complexity: Conceptualization and assessment of the environment. In S. L.  
Friedman & T. D. Wachs (Eds.), *Measuring environment across the life span: Emerging methods and concepts* (pp. 357-  
392). Washington, DC: American Psychological Association.
- 3 Ward, D. S., Vaughn, A., McWilliams, C., & Hales, D. (2010). Interventions for increasing physical activity at child  
care. *Medicine and Science in Sports and Exercise*, 42(3), 526-534. doi:10.1249/MSS.0b013e3181cea406
- 3 Waters, E., de Silva-Sanigorski, A., Hall, B. J., Brown, T., Campbell, K. J., Gao, Y., . . . Summerbell, C. D. (2011).  
Interventions for preventing obesity in children. *Cochrane Reviews*. Retrieved from  
[http://www.cochrane.org/CD001871/PUBHLTH\\_interventions-for-preventing-obesity-in-children](http://www.cochrane.org/CD001871/PUBHLTH_interventions-for-preventing-obesity-in-children)
- 

Adapted from Dunst, C. J. (2017). Research foundations for evidence-informed early childhood intervention  
performance checklists. *Education Sciences*, 7, 78; doi:10.3390/educsci7040078. Retrieved  
from <http://puckett.org/Research-Foundations-for%20Evidence-Informed-Early-Childhood-Intervention-Performance-Checklists.pdf>.

The adaptation consisted solely of changing the number of each Checklist only where necessary to ensure that the  
numbers in this table correspond to the Checklists published on <http://ectacenter.org/decrp/>.