

Uses of Technology to Support Early Childhood Practice

Overview

Technology has become increasingly prevalent in early care and education settings, yet little is known about the effectiveness, function, and requirements for technologies that are available to early childhood programs. As such, the Administration for Children and Families (ACF) Office of Planning Research and Evaluation (OPRE) contracted with NORC at the University of Chicago to review the knowledge base related to the use of technology to support the practice of early childhood practitioners who work directly with children and families.

The review was designed to examine uses of technology among four Topic Areas of interest to ACF/OPRE. The first three Topic Areas focused on early childhood practitioners' use of technology to support 1) instruction and assessment, 2) parent, family and community engagement (PFCE), and 3) professional development and informal learning. The fourth Topic Area outlined barriers to and facilitators of practitioners' effective use of technology to support early childhood practice. NORC employed three methods to complete the review: a web search to obtain a broad sampling of both common and cutting-edge uses of technology; a search of academic databases to establish an evidence-base for the technologies; and interviews with 16 experts who have built, used, or evaluated these technologies. The full report presents findings from this review.

Technology is a *tool*—a means for practitioners to more efficiently and effectively achieve the ultimate goal of improving child outcomes.

Key Findings

- The integration of curricula and assessments via technology is enabling practitioners to better track child progress and individualize instruction.** Developers are building software packages that can capture assessment data, score it, and provide data-based instructional suggestions instantaneously. Results can be used to differentiate instruction to an individual child or aggregated across multiple children to form small groups. The technologies allow for objective data based decision making for instruction.
- Video and traditional software are the two most common technologies to support PFCE.** The prevalence of these technologies is consistent with the two primary objectives for PFCE technology use – to develop and maintain positive relationships through regular communication, and to build parents’ skills by sharing facts, ideas, and exemplars with children’s parents.
- Effective professional development products/programs use a variety of video technologies to communicate with practitioners, model behavior, and critique practice.** Video had the strongest evidence base for a professional development technology. Live video conferencing connects practitioners with expert coaches remotely. Recordings of high quality teaching provide practitioners with quality exemplars to model practice. Video recordings of one’s own practice allow for self-reflection and third party review and critique.
- Administrators play a key role in either encouraging or hindering practitioners’ use of technology.** Providing adequate resources, training, and technical support, leading by example, and recognizing high performing staff, are among the most effective strategies to encourage successful practitioner use of technology.

Strong empirical evidence demonstrating effectiveness can engender support for technology use among administrators and practitioners. However, the existing evidence base for the use of current technologies to support early childhood practice is sparse. To inform practice, studies that produce evidence of effectiveness for current technologies in a timely manner are needed.

Authors:

Marc W. Hernandez, Elc Estrera, and Carrie E. Markovitz, NORC at the University of Chicago
Paul Muyskens, Greg Bartley, Kerry Bollman, Gayle Kelly, and Ben Silbergliitt, TIES

**Kathleen Dwyer
Project Officer**

Office of Planning, Research and Evaluation; Administration for Children and Families; Department of Health and Human Services

<http://www.acf.hhs.gov/programs/opre>

Contract Number:
HHSP23337042T

**Marc Hernandez
Project Director**

Firm name & address:
NORC at the University of Chicago
1155 East 60th St, 3rd Floor
Chicago, IL 60637

Suggested citation:

Hernandez, M.W., et al. (2015). *Uses of technology to support early childhood practice: Overview*. OPRE Research Snapshot. OPRE Report 2015-38. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Disclaimer:

The views expressed in this publication do not necessarily reflect the views or policies of the Office of Planning, Research and Evaluation, the Administration for Children and Families, or the U.S. Department of Health and Human Services