

2012 Context Study of the Use of Technology and PBS KIDS Transmedia in the Home Environment

EXECUTIVE SUMMARY

REPORT TO THE CPB-PBS *READY TO LEARN* INITIATIVE



September 2012

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CONTEXT FOR THE STUDY

The CPB-PBS *Ready To Learn* initiative, funded by the U. S. Department of Education, brings engaging, high-quality media to young children who may be at risk for academic difficulties due to economic and social disadvantages. The initiative aims to deliver early mathematics and literacy resources on new and emerging digital platforms such as tablet computers, interactive whiteboards (IWBs), and smartphones, as well as better-established technologies such as computers, video displays, and gaming consoles, and to create learning experiences that leverage the unique capabilities of these various technology platforms.

STUDY OVERVIEW

The 2012 Context Study of the Use of Technology and PBS KIDS Transmedia in the Home Environment is an important part of the multiyear summative evaluation by Education Development Center, Inc. (EDC), and SRI International (SRI) of the CPB-PBS *Ready To Learn* Initiative. The study responds to a need to understand family patterns of media and technology use at home—a need recognized by the U.S. Department of Education, the Corporation for Public Broadcasting (CPB), and PBS. This Home Study extends the survey and focus group analyses produced in our 2012 *Ready To Learn* Parent Study by analyzing how *Ready To Learn* families adopt, use, and report benefitting from technology and PBS KIDS transmedia in their homes.

METHODS AND SAMPLE

A total of 14 low-income families with children ages 2–8, participated in the Home Study (seven on the east coast, seven on the west coast) and were given a laptop, a tablet computer, and a guide directing them to available PBS KIDS transmedia content such as online games, tablet apps, and television programs. We used strategic sampling methods to maximize participation and diversity within our sample. On both coasts we attempted to enroll families that represented a range of technology use and comfort. On the east coast, researchers called eligible families enrolled in the 2012 *Ready To Learn* Prekindergarten Mathematics Pilot Study on a rolling basis until seven families agreed to participate. On the west coast, eligible families were stratified based on language(s) spoken in the home, whether the family had a home computer, and whether the family had home Internet access. To ensure that families were selected randomly, we used a lottery system to rank families, and then called them in order until seven families agreed to participate.

The majority of the information collected came from two in-person interviews that took place within 2 weeks of families receiving their technology and in their final weeks of participation in the study. These interviews were the principal modes of data collection for the Home Study; however, in order to support families in their use of the technology and the PBS KIDS transmedia, we collected additional data, by asking families to reflect on their technology and transmedia use via checklists, and through weekly telephone check-ins.

FINDINGS

CHILDREN

Though families' reports regarding children's use of media and technology varied from household to household, the following trends emerged:

- **Game play was quite popular on all platforms, from stand-alone consoles to hand-held devices.** Children played games on gaming systems (both portable and console), desktop computers, laptop computers, smartphones, and tablets, and were typically allowed to use whatever devices parents had in the home.
- **Educational uses of media, including using media to support reading and math, were secondary to children's use of technology for entertainment.** Parents wanted their children to learn from their technology use and indicated that their children were learning letters, numbers, vocabulary, and other content from programs they watched and games they played. But while selecting media content, children sought games and apps they found enjoyable, while parents were primarily concerned about ensuring their children were not exposed to violent or otherwise age-inappropriate material.

FAMILIES' USE OF PBS KIDS CONTENT AND STUDY TECHNOLOGIES

Parents found their own technology use increased with the addition of two devices to the home, and many reported that their children's technology use was switching away from television viewing and toward online game play.

- **Parents called out the overall educational value of PBS KIDS content and activities.** Across the board, parents had positive opinions of PBS KIDS content in general and PBS KIDS transmedia suites in particular once the Home Study got underway. Parents found that the games addressed a good variety of skills and had the right level of challenge.
- **Families reported increased game play (generally on the study-provided iPads and laptops) and, in some cases, less television watching.** Some changes in children's and parents' technology use was observed over the course of the study, even in those families that previously had high levels of access to technology. Parents reported that some of the time children had previously spent watching television had been replaced with time playing games on the iPad and laptop received for the study.
- **Children overwhelmingly preferred using iPads to laptops, largely due to ease of use.** Parents reported that the laptops were harder for children to use, even with the addition of an external mouse, and could not compete with the tablet's touchscreen interface. Children tended to be able to use the iPad on their own, without parent support, a factor which was attractive to parents and which may have appealed to children. Parents also preferred the tablet's portability, taking it on subway rides and long car trips.
- **Some parents said their conversations and social time had become more frequent or rich during the study's technology experiences.** In several cases, families reported that technology use provided an opportunity for family time, playing games, or watching shows together.
- **Siblings played together, and older siblings often supported their younger siblings' play and learning.** Sibling play – and in some cases, cousin play – was an important dynamic for technology use in many of the households visited.

MEDIA USE AS A REFLECTION OF FAMILY LIFE

As a rule, families in our study expressed a belief in the value of technology for learning. In general, parents were of the opinion that the knowledge of technology skills would influence (and potentially shape) positive futures for children; however, parents did not associate particular programs or games with skills or content children were learning. At the same time, parents were concerned that technology use might limit their children's healthy development, for example, by leading to sedentary behavior, and they attempted to limit technology use both in time and content.

- **Parents' approaches to their children's technology use stemmed from their broader notions of childrearing and the multiple demands of maintaining a household.** Parents employed a variety of strategies toward moderating their children's technology use and behaved at times in ways that seemed contradictory—for example, wanting children not to use the iPad for extended periods, but appreciating that dinner was made more easily while children were occupied with digital games.
- **Parents expressed a need to limit children's media experience, primarily out of concern that they would be exposed to inappropriate and/or violent content.** Parents applied different criteria to limit the media content to which their children were exposed. Some reported that what their children did with technology had to be educational; others wanted to be sure the content was child-appropriate.

FUTURE CONSIDERATIONS

RECOMMENDATIONS FOR CPB, PBS, AND PRODUCERS

- Continue to keep in mind that children commonly consume content with little parental (or caregiver adult) oversight, making it essential for PBS to preserve its reputation as a provider of age-appropriate, engaging content for children and families. Parents count on public media to be educational and safe, appreciating bright lines separating it from the commercial, the crass, and/or the careless.
- Design for low-income households where parents may have had fewer experiences navigating information and educational resources for themselves as well as for their children. Remain aware that the digital divide still exists and keeps content from reaching a segment of the population.
- Consider embedding tips for parents into games, helping them support their children's learning with better questions. For those parents inclined to act as supportive observers, give them a way into interacting with children during play. Brief, well-timed reminders can go a long way.
- Create more games that parents and children, and sibling pairs and/or groups, can play together.

RECOMMENDATIONS FOR RESEARCHERS

- Explore how notions of “shared” and “personal” media play out in typically under-resourced households and how these notions influence the learning opportunities children do and do not typically have.
- Identify supports parents and caregivers need to make use of resources initially designed for children's use but lend themselves to new family routines and group interaction.
- Continue to study play patterns that have young children moving in and out of collaboration with one another and solo play. Determine how children's culture gets constructed and passed down from older siblings to younger ones and what the learning opportunities are for both.

About EDC/CCT

Education Development Center, Inc. is a global nonprofit organization that develops, delivers, and evaluates innovative programs to address urgent challenges in education, health, and economic development. EDC manages more than 300 projects in 35 countries. For more than 25 years, EDC's Center for Children and Technology has been at the forefront of creating and researching new ways to foster learning and improve teaching through the development and thoughtful implementation of new educational technologies.

About SRI/CTL

SRI International is an independent, nonprofit research institute conducting client-sponsored research and development for government agencies, commercial businesses, foundations, and other organizations. SRI's Center for Technology in Learning (CTL) evaluates large-scale technology innovations, designs assessments that enhance teaching and learning, develops tools to help students master complex ideas, builds online communities of learners, and offers strategic learning consulting services.

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