Learning at Home: Informing Large-Scale Practice Through a National Survey and Qualitative Study

Background

What supports do parents need to foster learning at home? This is among the questions that drive Ready to Learn, a U.S. Department of Education-funded initiative at the Corporation for Public Broadcasting (CPB) and the Public Broadcasting System (PBS) that produces evidence-based media and resources for low-income families with young children. To answer this question, this study pairs a nationally representative survey with a qualitative study to investigate parents' perceptions of their role in children's learning. Findings will inform the development of public media resources for young children and parents. These media have the potential for broad impact: 68% of all young children watched PBS during the 2015-16 season, and in 2016, 40% of all the time spent watching children's videos online was spent on the PBS KIDS website (PBS, 2017).

This work builds on existing surveys about the role of media in families' learning at home (e.g., Rideout, 2014), by contextualizing media use within families' broader learning activities and parental mediation of learning media. It also expands on existing national surveys of parents' support for literacy and mathematics learning at home (e.g., O'Donnell, 2008) to encompass science learning.

Objective and Research Design

The study asks how parents and caregivers support early learning and early science learning, and how they use media to support learning at home. It then asks what supports parents need to support their child's learning.

The study has two components: (a) A nationally representative survey of parents about their perceptions of their role in their child's early learning generally, and their science learning and learning from media specifically; and (b) An in-depth qualitative study comprising focus groups and home visits with low-income families, to investigate how families perceive and support early learning and science learning, and what resources they use. While this study will not generate causal findings, synthesizing across nationally representative survey data and extensive qualitative data will yield a rich description of families' experiences, with implications for the development of family learning supports.

National Survey

Data for this study came from a telephone (cellphone and landline) survey conducted between August 31 and October 8, 2017, of a nationally representative sample of 1,442 parents or guardians with at least one child aged 3–6 years living at home. The survey was developed and piloted by researchers at EDC and SRI and conducted by SSRS, a survey and market research firm. The survey oversampled low-income parents—909 families (63%) had an annual household income of $50,000 or less.

Qualitative Study

Researchers collected data through a two-tiered process intended to foster participants' comfort with the researchers before collecting data in families' homes. Tier one consisted of focus groups with 65 low-income families in Illinois, Tennessee, and Mississippi. Parents discussed their children's early learning and their own role in supporting learning. Tier two comprised two home visits each to 11 families. Researchers observed child and parent interactions using digital media

– a short online video and an online game – and continued discussions about parents' perceptions of and role in their child's early learning.

Analysis
We examined frequencies of survey participants' reports about their attitudes, beliefs, and practices related to early learning, science learning, and media use. In addition to describing patterns across all families surveyed, we examined whether parents' attitudes and practices differed across household income and parental education. Data were analyzed using survey weights to account for the probability of sampling.

Researchers coded the interview and observation data thematically based on the research questions, and identified and summarized cross-cutting themes across data sources.

Findings
Most parents surveyed reported high levels of confidence in helping their young children with reading, mathematics, and social skills. On the other hand, just over half of parents reported that they felt very confident in their ability to assist their child in learning about science. Low-income parents were less likely than parents with higher incomes to report that they felt very confident in their ability to support their children's science learning (Table 1). Interviews and focus groups suggest that parents' confidence for supporting math and literacy is grounded in their ability to provide academic support, whereas confidence for supporting science is based on parents' ability to answer children's spontaneous scientific questions.

Nearly all parents reported engaging their child daily in activities that support learning, but only about half of parents reported engaging their child daily in activities that support science learning. Parents reported that having more ideas for science activities would help "a lot" in doing more science at home. Low-income parents were more likely than higher income parents to report that having access to technology and information about science learning would help "a lot" in doing more science at home (Table 2).

All parents reported that their children used science media – such as TV/video, games, or websites – at similar rates, regardless of income. While their children engaged with science media, most parents, regardless of income, reported monitoring and complimenting their children. Fewer parents, however, reported engaging in practices that best support learning, such as talking about connections between the science media content and children's daily experiences. Parental income was not clearly associated with parents' engagement in practices that can support children's learning from science media (Table 3). Why are fewer parents relating science media to children's daily lives? Qualitative findings suggest parents may view science media as entertainment when their children view it casually; they may be more likely to consider science media an educational resource when searching for answers to questions.

Conclusions
Survey and qualitative data suggest a need for enhanced supports to help parents engage in science learning with their children. Findings have implications for the design of public media and other science learning resources for families. This presentation will be relevant to

researchers interested in approaches to synthesizing survey and qualitative data in ways that inform the development of large-scale impact projects.

References

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Table 1.
Percent of parents who report feeling very confident in supporting children's early skills.

	Reading and writing	Mathematics	Behavioral and social skills	Science
	Very confident			
All respondents	*N* = 1442	*N* = 1442	*N* = 1442	*N* = 1442
	74.7	72.5	70.8	54.3
Income status	*n* = 1415	*n* = 1415	*n* = 1415	*n* = 1415
Annual income less than $25,000	74.5	66.2	71.7	46.5
Annual income less than $25,000-$50,000	74.4	71.3	73.9	49.9
Annual income less than $50,000-$75,000	65.6	74.8	66.2	58.3
Annual income less than $75,000-$100,0000	82.4	79.6	71.1	60.6
Annual income $100,000 or higher	76.0	79.5	71.2	62.0

Table 2.
Percent of parents who report that supports would help a lot in doing more science at home.

	Access to technology	Information about what child should learn	Ideas for science activities to do with your child
		Would help a lot	
All respondents	*N* = 1442	*N* = 1442	*N* = 1442
	44.4	64.0	71.1
Income status	*n* = 1415	*n* = 1415	*n* = 1415
Annual income less than $25,000	65.3	78.0	77.1
Annual income less than $25,000-$50,000	50.4	68.9	74.4
Annual income less than $50,000-$75,000	39.7	58.3	63.6
Annual income less than $75,000-$100,0000	31.0	56.3	71.1
Annual income $100,000 or higher	28.4	53.7	63.8

Table 3.
Percent of parents who report engaging in science-related media with their child daily, among parents who engaged with science-related media in the last month.

	Compliment or encourage child	Monitor child's viewing and playing	Talk about connections
	Engaged with media daily		
All respondents	*N* = 1310	*N* = 1309	*N* = 1307
	82.0	81.2	31.8
Income status	*n* = 1287	*n* = 1286	*n* = 1284
Annual income less than $25,000	78.4	81.6	41.0
Annual income less than $25,000-$50,000	82.1	81.3	37.8
Annual income less than $50,000-$75,000	85.1	78.0	26.2
Annual income less than $75,000-$100,0000	86.4	84.1	37.1
Annual income $100,000 or higher	82.5	75.6	22.3