

What Parents Talk About When They Talk About Learning

A National Survey About Young Children and Science

March 1, 2018



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Introduction

Parental Involvement in Early Science

- Early science experiences can provide a foundation for a variety of skills (Bustamante et al., 2017; Kuhn, 2011; Morgan et al., 2016; Nayfeld et al., 2013; Peterson & French, 2008; Wright & Neumann, 2014).
- Parents can play an important role in improving their children's literacy and math learning (Burgess et al., 2002; Niklas et al., 2016; Sénéchal & LeFevre, 2002; Skwarchuk, Sowinski, & LeFevre, 2014)
- Similarly parent involvement could be vital in improving children's science learning—especially given many early education programs do not address science (Blank, 2013).

Role of Media

- Educational media may help parents support science learning.
- Media are ubiquitous in most families with young children (Rideout, 2017).
- Certain kinds of media experiences at home can:
 - Support learning (Mares & Pan, 2013; Pasnik et al., 2013)
 - Help parents—especially ones who lack confidence—help their children learn (Berkowitz et al., 2015).

This Study

- Purpose: Explore how parents and caregivers view their role in supporting their three to six year old children's learning, particularly science.

Research Questions

1

How do parents and caregivers help their young children learn in general and learn science in particular?

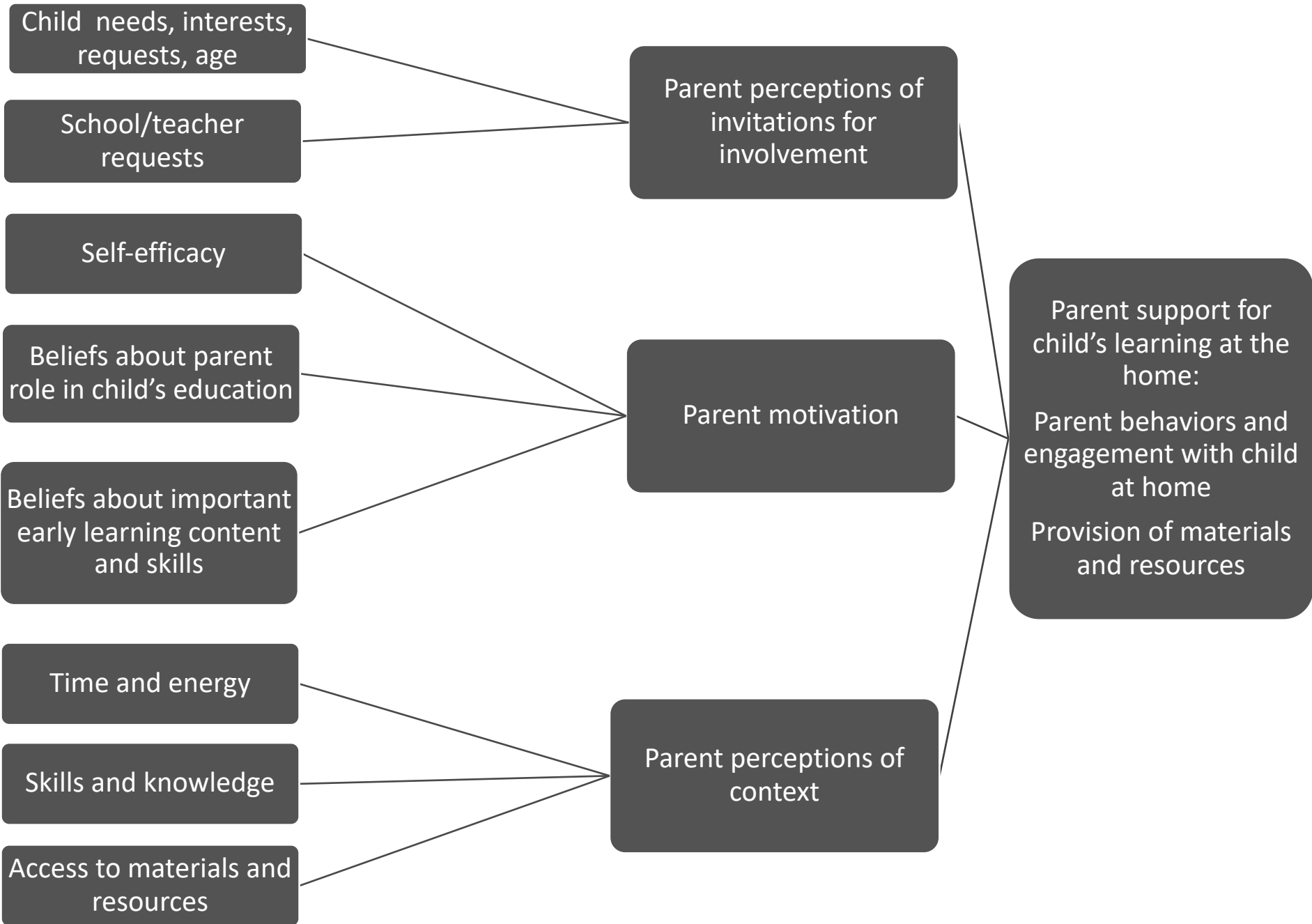
- What are parents' attitudes and beliefs about children's early learning?
- How do parents support their children's early learning?

Research Questions

2

How do parents describe their children's use of **educational media**?

- What are parents' attitudes and beliefs about using media to support learning at home?
- What kinds of media activities do parents and children undertake together?





Methods

National Survey

- National telephone survey of 1,442 parents with at least one 3-6-year-old child living at home
- 909 families (63%) had an annual household income of \$50,000 or less
- Margin of sampling error is +/-3.5 percentage points at a 95% confidence level.
- Analyses focus on simple frequencies, applying sampling weights to account for the probability of selection

National Survey

Questionnaire design

- Based on existing surveys when available.
- Conducted 6 focus groups with diverse families
- Experts in measurement, family engagement in learning, and media use reviewed survey items.
- Interviewed 8 parents regarding wording and meaning of survey items
- Pre-tested phone-based interview with 19 parents

Qualitative Study

- Eight focus groups with a total of 65 families in three locations
- Two home visits with 10 families (selected from focus group participants to ensure variety of comfort with science and use of digital media)
- Science journal between home visits
- To analyze the qualitative data, researchers iteratively coded the observation and interview data thematically and identified and summarized cross-cutting themes across data sources.





Results

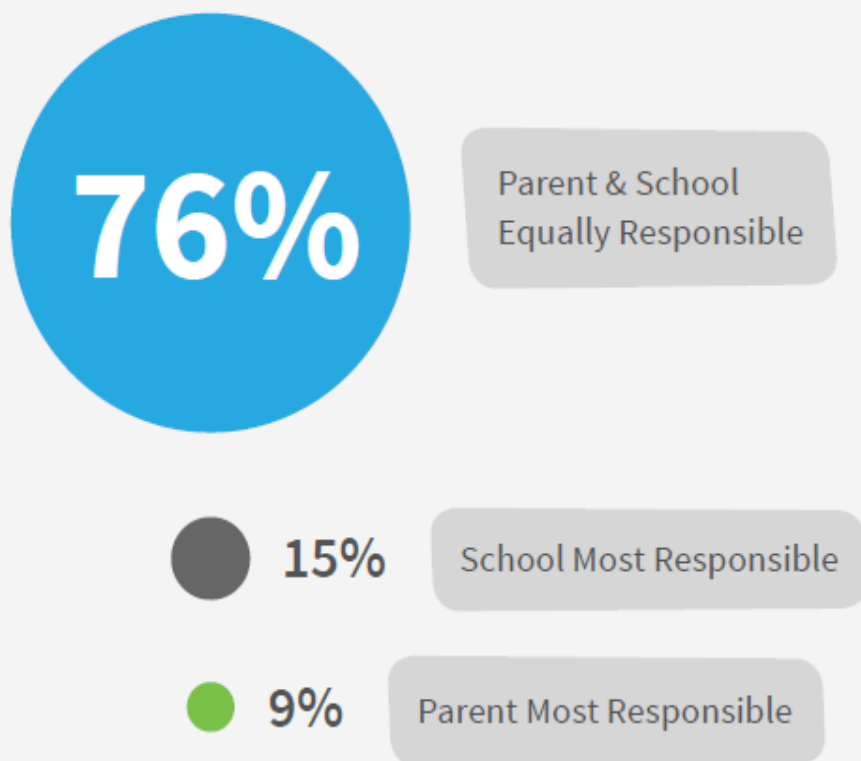
Responsibility for Learning

99% of parents

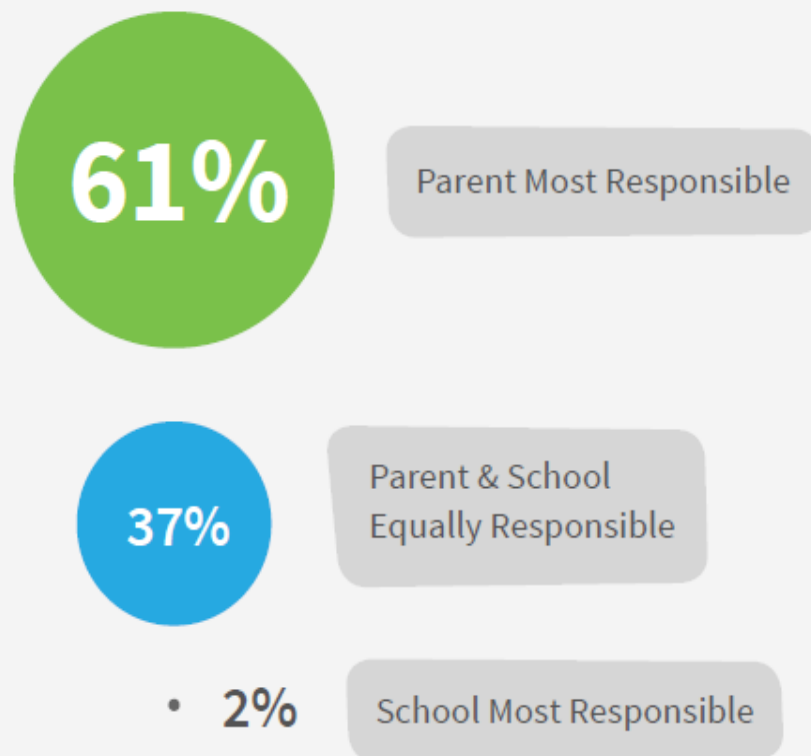
- **Report that they want to be involved in their children's education**

Responsibility for Learning

Academic skills, such as reading, math



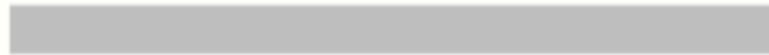
Social skills, such as sharing, patience



Confidence

Percentage of Parents Who Feel “Very Confident” in their Ability to Help Their Children Learn Age-Appropriate Skills

75%



Reading and writing skills

73%



Math skills

71%



Behavioral, social, and emotional needs

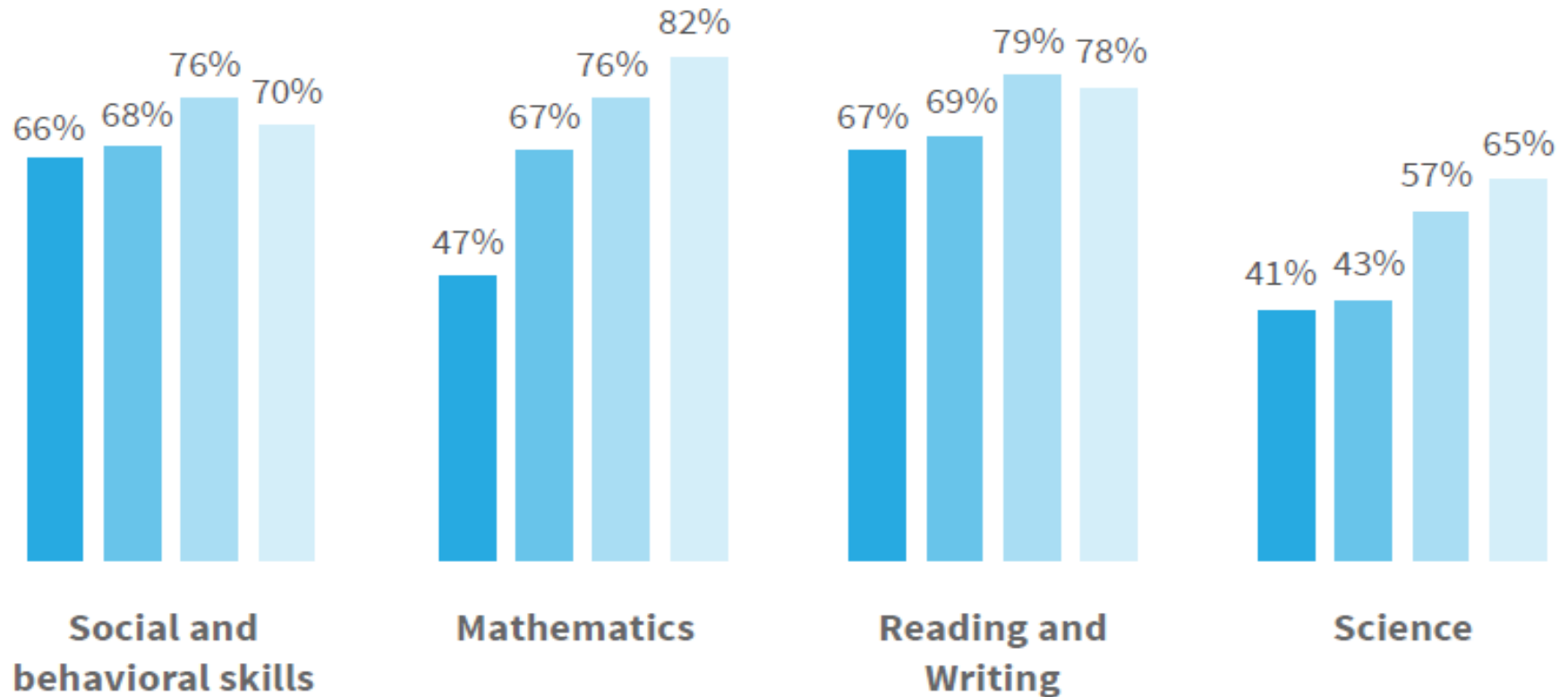
54%



Science skills

Confidence

Percentage of Parents Who Feel “Very Confident” in their Ability to Help Their Children Learn Age-Appropriate Skills, by Parent Education



● Less than High school

● High school grad

● Some college

● College grad+

Parents Say



I've never liked reading, and I hate when he's got some work that's got to be read. I really hate it. Of course, he can't read just yet. You know, he can read a little bit but that's the hardest part for me, because I hate reading [...] that's the hardest part for me.



Confidence

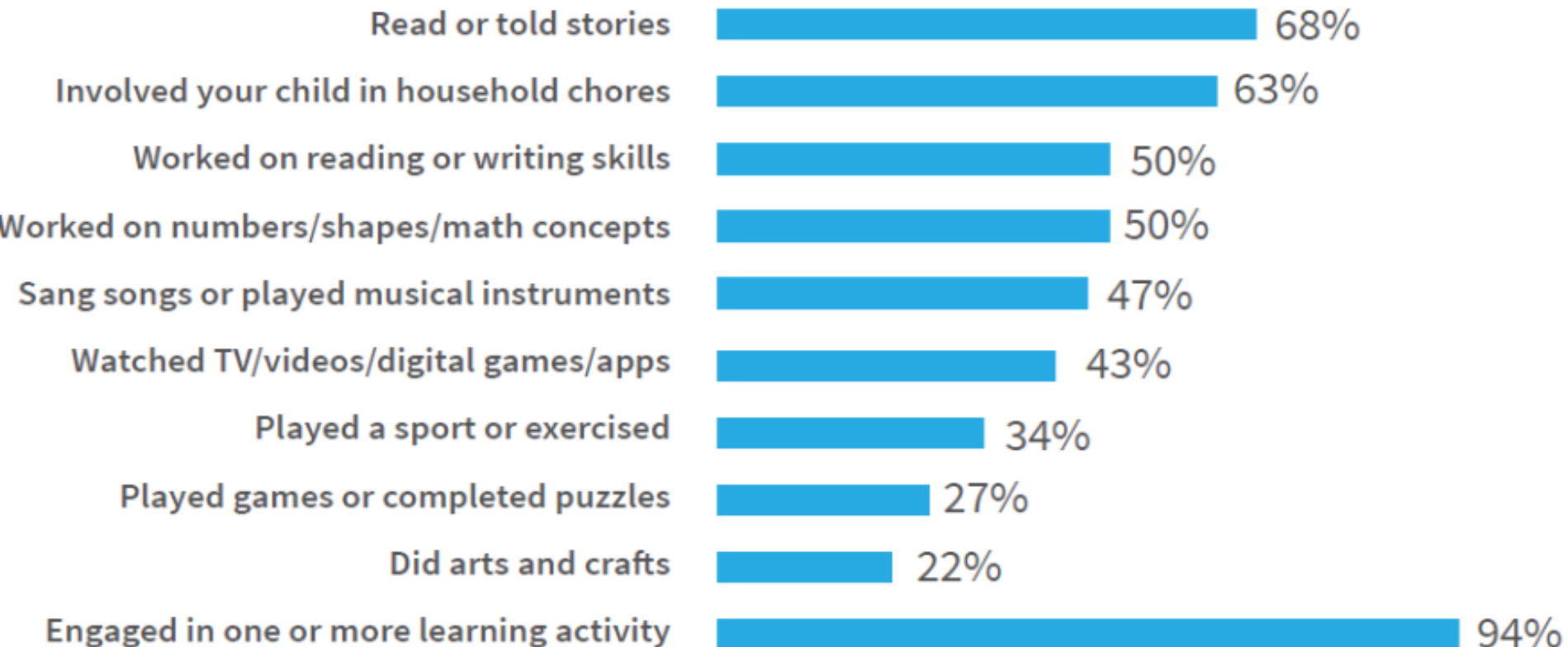
Parents described their confidence about science in terms of their ability to...

- Answer spontaneous questions
- Communicate information appropriately

Learning Activities

Percentage of Parents Who Report Engaging in Learning Activities With Their Child Daily

General Learning Activities



Science Activities

Percentage of Parents Who Report Engaging in Science-Related Learning Activities With Their Child Daily

Science Learning Activities

Explored science outdoors 36%

Explored science in everyday activities 26%

Watched science-related videos/played digital games 20%

Built something 17%

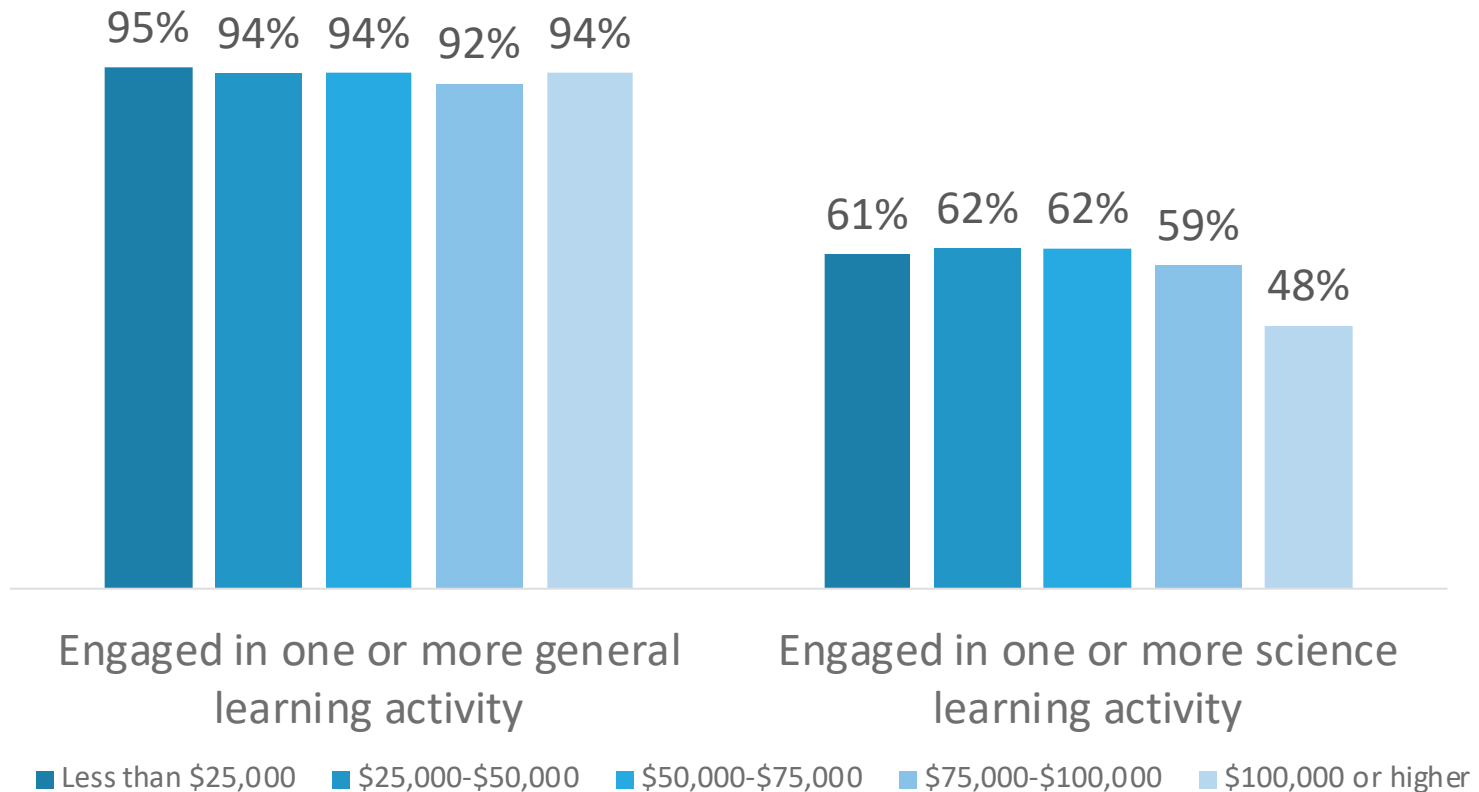
Read about nature in science books or magazines 12%

Played with a science-related puzzle or board game 5%

Engaged in one or more science learning activity 58%

Science Activities

Low-income parents reported engaging in science-related activities more frequently than higher-income parents



Parents Say



*I guess, balance, that's science right? [...]
Yeah, balance and motion and, gosh all
this other terminology that I don't
remember from 6th grade.*



Supports

Percentage of Parents Who Reported That a Given Support Would Help “a Lot” in Doing More Science at Home

45%

Better access to technology

52%

Ways to get yourself more interested in science

64%

Ways to get your child more interested in science

64%

Information about what your child should learn about science

71%

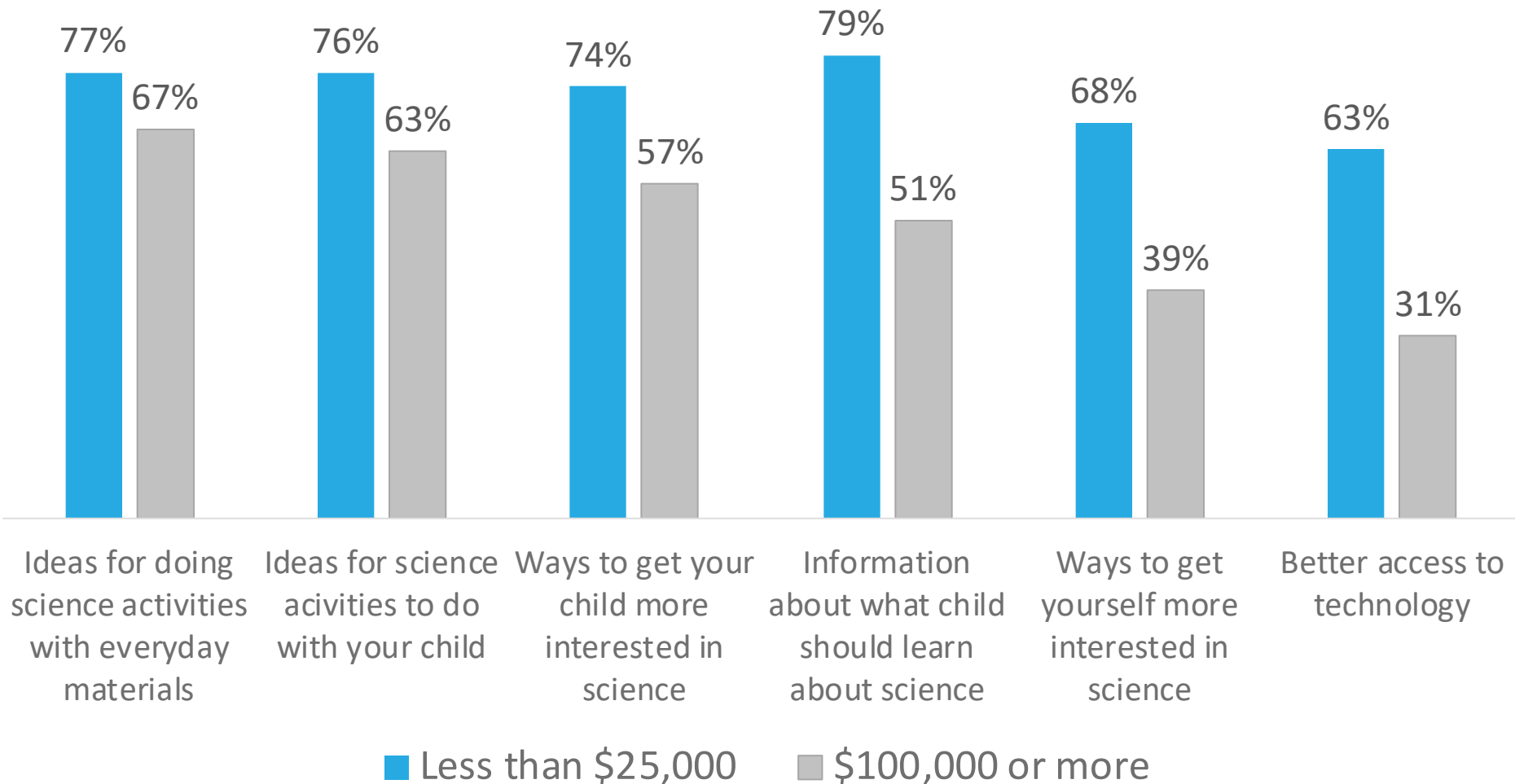
Ideas for doing science activities with everyday materials

71%

Ideas for science activities to do with your child

Supports

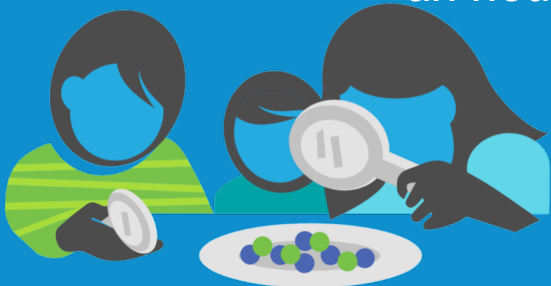
Percentage of Parents Who Reported That a Given Support Would Help “a Lot” in Doing More Science at Home, by Family Income



Parents Say



I think identifying ideas that ... I can do without it being, you know—I don't know if this is going to sound bad—but, like, a really huge thing. Because we're super stressed for time, too. So, I can't go and make her something that's going to take, you know, 20 minutes to set up and 30 minutes to do, and then an hour to clean it off everything...

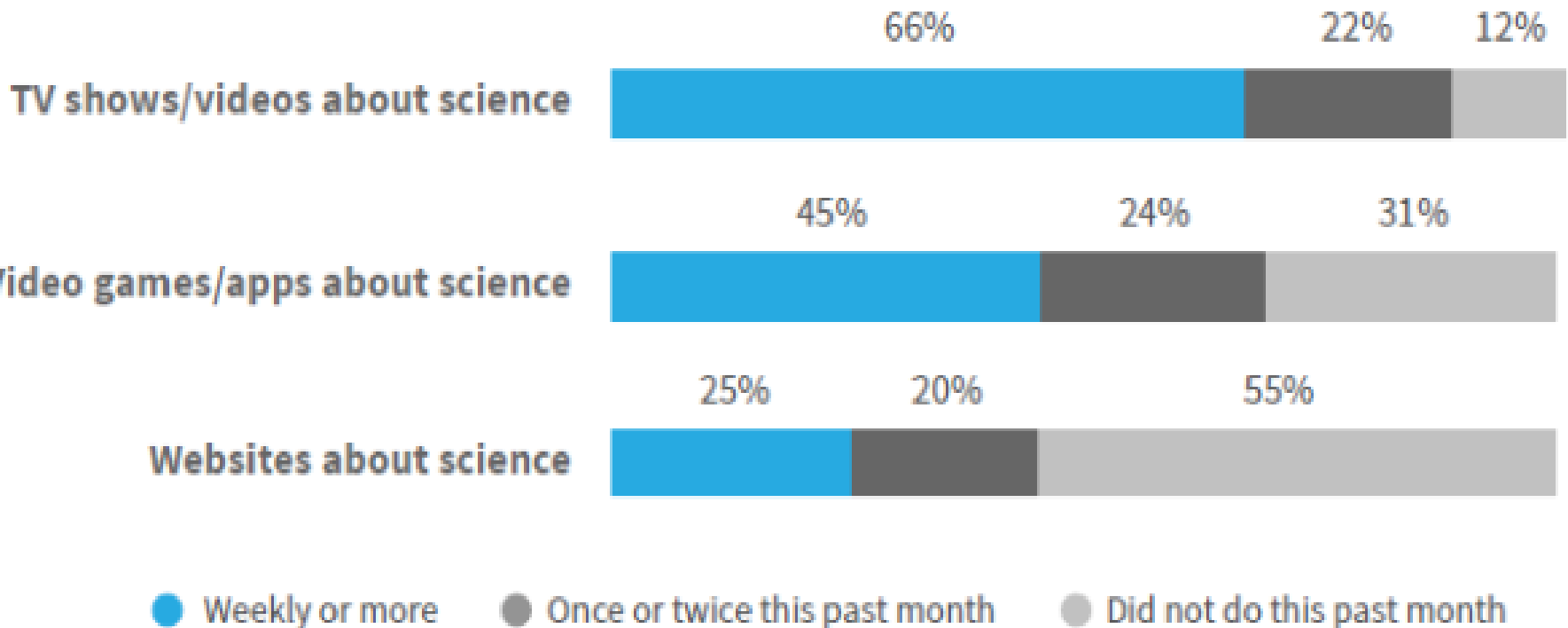


Digital Media Supports

- **94%** of parents reported that their child watched educational TV shows or videos in the past month.
- **84%** of parents reported that their child had played a digital game or app in the past month.

Digital Media Supports

Many children use science media weekly or more



Digital Media Supports

Parents' report of supports they provide while using science media, among parents who used science media in the last month

95%



94%



86%



75%



73%



69%



Digital Media Supports

- Parents most frequently use science media to search for answers to specific questions
- View science media as entertainment rather than educational
- Lack of explicit goals for children's use of science media



Discussion

Supporting Parents

- Parents are interested and invested in their children's education.
- They may not recognize the role they play in science exploration.
- Information may help.
 - Incorporating science into everyday routines.
 - Importance of science for early learning.

Media Resources

- Young children use educational media & science-related media regularly.
- Additional resources for everyday science have potential to help parents and children.

Acknowledgements







Funding from the U.S. Department of Education Ready To Learn Initiative (U.S. Department of Education Award Number U295A100), in collaboration with CPB-PBS.



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Thank You

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Report available at
<http://www.edc.org/what-parents-talk-about>

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