What Parents Talk About When They Talk About Learning

A National Survey About Young Children and Science

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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?
Parent support for child’s learning at home: Parent behaviors and engagement with child at home
Parent motivation

Provision of materials and resources

Parent perceptions of invitations for involvement

Beliefs about important early learning content and skills

Parent perceptions of context

Beliefs about parent role in child’s education

Self-efficacy

School/teacher requests

Child needs, interests, requests, age

Time and energy

Skills and knowledge

Access to materials and resources

Adapted from Walker, Wilkins, Dallaire, Sandler & Hoover-Dempsey 2005
Methods

What Parents Talk About When They Talk About Learning: A National Survey
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

- 76% Parent & School Equally Responsible
- 15% School Most Responsible
- 9% Parent Most Responsible

Social skills, such as sharing, patience

- 61% Parent Most Responsible
- 37% Parent & School Equally Responsible
- 2% School Most Responsible
### Confidence

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

<table>
<thead>
<tr>
<th>Skill</th>
<th>Confidence Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading and writing skills</td>
<td>75%</td>
</tr>
<tr>
<td>Math skills</td>
<td>73%</td>
</tr>
<tr>
<td>Behavioral, social, and emotional needs</td>
<td>71%</td>
</tr>
<tr>
<td>Science skills</td>
<td>54%</td>
</tr>
</tbody>
</table>
Confidence

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

![Bar chart showing percentage of parents feeling very confident in their ability to help their children learn various skills by parent education level.](chart-image)
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

<table>
<thead>
<tr>
<th>General Learning Activities</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read or told stories</td>
<td>68%</td>
</tr>
<tr>
<td>Involved your child in household chores</td>
<td>63%</td>
</tr>
<tr>
<td>Worked on reading or writing skills</td>
<td>50%</td>
</tr>
<tr>
<td>Worked on numbers/shapes/math concepts</td>
<td>50%</td>
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<tr>
<td>Sang songs or played musical instruments</td>
<td>47%</td>
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<tr>
<td>Watched TV/videos/digital games/apps</td>
<td>43%</td>
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<tr>
<td>Played a sport or exercised</td>
<td>34%</td>
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<tr>
<td>Played games or completed puzzles</td>
<td>27%</td>
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<tr>
<td>Did arts and crafts</td>
<td>22%</td>
</tr>
<tr>
<td>Engaged in one or more learning activity</td>
<td>94%</td>
</tr>
</tbody>
</table>
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.

Engaged in one or more general learning activity
- Less than $25,000: 95%
- $25,000-$50,000: 94%
- $50,000-$75,000: 94%
- $75,000-$100,000: 92%
- $100,000 or higher: 94%

Engaged in one or more science learning activity
- Less than $25,000: 61%
- $25,000-$50,000: 62%
- $50,000-$75,000: 62%
- $75,000-$100,000: 59%
- $100,000 or higher: 48%
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

<table>
<thead>
<tr>
<th>Support</th>
<th>Less than $25,000</th>
<th>$100,000 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideas for doing science activities with everyday materials</td>
<td>77%</td>
<td>67%</td>
</tr>
<tr>
<td>Ideas for science activities to do with your child</td>
<td>76%</td>
<td>63%</td>
</tr>
<tr>
<td>Ways to get your child more interested in science</td>
<td>74%</td>
<td>57%</td>
</tr>
<tr>
<td>Information about what child should learn about science</td>
<td>79%</td>
<td>51%</td>
</tr>
<tr>
<td>Ways to get yourself more interested in science</td>
<td>68%</td>
<td>39%</td>
</tr>
<tr>
<td>Better access to technology</td>
<td>63%</td>
<td>31%</td>
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</table>
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

- TV shows/videos about science: 66% weekly or more, 22% once or twice this past month, 12% did not do this past month
- Video games/apps about science: 45% weekly or more, 24% once or twice this past month, 31% did not do this past month
- Websites about science: 25% weekly or more, 20% once or twice this past month, 55% did not do this past month
Digital Media Supports

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

- 95% Monitor child’s viewing an playing
- 94% Compliment or encourage a child
- 86% Explain or talk about something that you’re watching or playing
- 75% Watch a show or play a game or app along with child
- 73% Help your child access and play a show, app, or game
- 69% Talk about connections between a show, app, or game
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.
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Thank You

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


