

Ready To Learn Research: PBS KIDS ScratchJr Family Creative Learning Workshop Implementation Study



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Ready To Learn Research: PBS KIDS ScratchJr Family Creative Learning Workshop Implementation Study

This report details an implementation study of the PBS KIDS ScratchJr *Family Creative Learning*¹ (FCL) *Workshop*. FCL Workshops are administered by Community Collaboratives for Early Learning and Media (CC-ELM), a new aspect of the CPB-PBS Ready To Learn initiative. Through CC-ELM, the Corporation for Public Broadcasting (CPB) and the Public Broadcasting Service (PBS) seek to leverage public media station resources to more directly engage local communities. CC-ELM consist of PBS member stations and their community partners, such as schools or districts, libraries, and housing developments. Local public media stations typically lead facilitation and provide technology for the workshop, while partners may contribute by recruiting participants, co-facilitating workshops, or providing workshop space.

As research partners to the CPB-PBS Ready To Learn Initiative, the independent research firms Education Development Center, Inc. (EDC), and SRI International (SRI) undertook an implementation study of the first round of the ScratchJr FCL Workshops. These workshops were enacted by 16 CC-ELM around the country in 2016 and 2017, the first two years of CC-ELM implementation.

The ScratchJr FCL is a four-session workshop that engages families and children (ages 5–8) in creative coding through the use of the PBS KIDS ScratchJr app. The workshop engages families in engineering activities that use PBS KIDS characters and content. The workshop supports families as they explore, play, and learn together in community-based settings. Through child-led projects, the workshops aim to foster collaboration, communication, and problem-solving skills among families as they are introduced to coding and are empowered to create and express themselves with media and technology. (The ScratchJr FCL Workshop theory of change is included in Appendix A.)

The purpose of this study is to help local public media stations, CPB, and PBS better understand how they are reaching their target audiences, how stations are working with community partners, what impact they are having on families in the community, and how the workshop format and content can be improved to support program goals and expectations. Researchers collected data that describe workshop implementation, child

¹ This model is based on the Family Creative Learning workshop series originally developed by Ricarose Roque of CU-Boulder.

outcomes, parent/caregiver experiences, and station/partner experiences. (See Appendix B for a detailed list of research questions.)

Study Design

As the focus of this study was to document and understand the implementation and potential impact of FCL Workshop experiences, EDC/SRI used a single-condition design that focused on the experiences of families, facilitators, stations, and community partners. Researchers collected survey data from all 16 CC-ELM, and conducted repeated observations and interviews with five CC-ELM selected for diversity in terms of location, population, partner(s), and experience with community partner collaborations. (Research questions, their connections to outcomes and participants, and their relevance to PBS and CPB goals for this evaluation, are included in Appendix B.)

The research team worked with the following public media stations² to include families and facilitators from all 16 CC-ELM in the study:

- Detroit Public Television (Detroit, MI)
- Kentucky Educational Television (Lexington, KY)
- KBTC (Tacoma, WA)
- KLRU (Austin, TX)
- Mississippi Public Broadcasting (Jackson, MS)
- PBS SoCaL (Los Angeles, CA)
- WCTE (Cookeville, TN)
- WFSU (Tallahassee, FL)
- WGBH (Boston, MA)
- WQED (Pittsburgh, PA)
- WVIZ/PBS Ideastream (Cleveland, OH)
- Iowa Public Television (Johnston, IA)
- Vegas PBS (Las Vegas, NV)
- Nine Network of Public Media (St. Louis, MO)

² Locations listed are station headquarters and do not necessarily indicate FCL locations.

- WFYI Indianapolis (Indianapolis, IN)
- Oklahoma Educational Television Authority (Oklahoma City, OK)

CC-ELM were involved in the study in one of two ways. (1) Families and facilitators from all 16 CC-ELM were invited to participate in surveys. Of these 16 stations, one station was excluded from the dataset because it was not able to collect survey data. (2) For five of the 16 CC-ELM, additional observations and interviews were conducted during site visits, which took place at the first and last (typically the fourth) session of the FCL Workshop (identities of stations protected for confidentiality).

In selecting CC-ELM to participate in site visits, EDC/SRI considered the following criteria: geographic diversity (including urban and rural sites); population diversity (e.g., including majority African-American and Latino populations); a range of partners involved in providing FCL Workshops; and inclusion of sites that have piloted FCL Workshops previously, as well as those implementing FCL Workshops for the first time. Sites selected for observation were finalized in consultation with CPB and PBS staff.

CC-ELM varied in how they implemented the ScratchJr FCL Workshop and study measures. For example, three CC-ELM implemented the program in three sessions instead of four. One CC-ELM implemented all sessions during a single week rather than spreading the sessions out over four weeks. One CC-ELM conceptualized this implementation of the ScratchJr FCL Workshop as an opportunity for families who had previously participated in a pilot ScratchJr FCL Workshop to expand on their skills, and thus provided less instruction and more opportunities for open-ended exploration.

Data Collection Activities

Researchers collected a variety of data to address the study's research questions. Table 1, below, shows how data collection activities map to key outcomes. Please refer to the appendices for study research questions (Appendix B), comprehensive descriptions of data collection activities (Appendix C), data collection protocols (Appendix D), and detailed data analysis procedures (Appendix E).

- **Facilitator survey.** Researchers worked with all 16 CC-ELM to distribute a facilitator survey. The survey measures basic characteristics of facilitators and workshops, facilitators' attitudes toward the ScratchJr FCL Workshop plans and technology, and successes and challenges encountered.
- **Parent/Caregiver Survey.** Researchers worked with all 16 CC-ELM to distribute a survey to all participating families at the start of the first workshop session and at the end of the final workshop session. The parent/caregiver survey covered family experiences in the workshop, parent attitudes, and parent perceptions of child learning.

- **Workshop Observation.** At five “site-visit” CC-ELM, researchers watched families as they participated in workshop activities during the first and last sessions. Observations focused on parent/caregiver and child interactions with the technology and with one another.
- **Informal Parent/Caregiver Conversation.** At the site-visit CC-ELM, researchers conducted brief, informal conversations with parents and caregivers during the first and last sessions. Conversations included family experiences, perceived program outcomes, and their relationships to public media.
- **Facilitator and Station/Community Organization Leader Interview.** At the site-visit CC-ELM, researchers interviewed workshop facilitators and station and community partner organization leaders. Interview topics included implementation strategies, successes, and challenges.
- **Learning Artifacts.** Researchers collected photographs of 16 families’ ScratchJr project screens during the final session of ScratchJr FCL Workshops hosted by the five site-visit CC-ELM. Photographs focused on the coding scripts families developed in ScratchJr. An example artifact is depicted in Figure 3 (page 20). Artifacts were analyzed for the number of total coding blocks, unique coding blocks, characters, and pages used in the project.

Table 1. Data Collection by Research Question

Outcome	Facilitator Survey	Parent/Caregiver Surveys	Workshop Observations	Informal Parent / Caregiver Conversations	Facilitator and Station/Community Organization Leader Interviews	Learning Artifacts
# of CC-ELM	16	16	5	5	5	5
Implementation	●		●	●	●	●
Child Outcomes (focus on target age group)	●	●		●	●	
Parent Outcomes	●	●		●	●	
Facilitator/Station/Community Outcomes	●	●		●	●	

Sample

Families

Table 2, below, shows the number of parents/caregivers who participated in data collection activities. Surveys were administered to parents attending FCL Workshops hosted by all 16 CC-ELM; observations, interviews, and conversations were conducted at the five site-visit CC-ELM. Of the 115 parents/caregivers who completed the pre-workshop survey, 70 also completed the post-workshop survey. During site visits to five CC-ELM, researchers completed a total of 45 informal conversations with parents/caregivers, and observed a total of 24 families.

Table 2. Number of Parent Participants in Data Collection

Data Collection Activity	First Session	Last Session
Parent/caregiver survey	115	77*
Informal conversation	25	20
Observation	16	18

Note. 70 parents/caregivers completed both the pre- and post- surveys.

Of the 115 parents who completed surveys during the first session, approximately half of the participating children were boys. The majority of parents/caregivers (80%) who participated were mothers. Results from the pre- survey were distributed with regards to maternal education, ranging from 8th grade or less to graduate degree. (See Table 3 for demographics.) The majority of the children who participated in the workshop were eligible for free or reduced-price lunch (63%). The majority of the families spoke in English as their primary language (96%).

Table 3. Frequencies and Percentages for Demographic Characteristics of Pre-Workshop Survey Respondents (N = 115)

Characteristic	%
Gender	
Male	50
Female	50
Relationship to Child	
Mother	80
Father	19
Guardian	<1
Mother's Education	
8th grade or less	10
Some high school	7
High school diploma or GED	15
Some college (no diploma)	18
Associate's degree (AA, AS) or technical degree	13
Bachelor's degree (BA,BS)	17
Graduate or professional degree	14
Don't know	6
Race	
White	40
Hispanic	30
Black	33
Asian	4
Hawaiian	0
Native American	2
Other	<1
Free Lunch	
Yes	64
No	29
Don't know/skip	8
Special Education	
Yes	16
No	79
Unsure	5

Of the children who participated in the ScratchJr FCL Workshop sessions, 62% fell within the target age range of 5–8 years old, while 36% were above the age range, and only 2% were below the range. Informal conversations with some stations indicate that the 5–8-year-old range was above the typical audience age range for stations' community engagement efforts, and that adjusting partnerships and recruitment plans to accommodate the target age range of the ScratchJr FCL Workshop was a challenge.

The largest percentage of children whose parents took the pre- survey were white (40%), followed by African-American (33%), and Hispanic (30%). Surveys were available in English and Spanish, but FCL

Workshops included families with a wide range of native languages (e.g., French, Vietnamese). On the parent survey, 4% of parents indicated that they did not speak English. In some sites, participants may have been unable to complete the surveys because of language barriers. Therefore, the survey response pool likely represents a limited range of participants with home languages other than English.

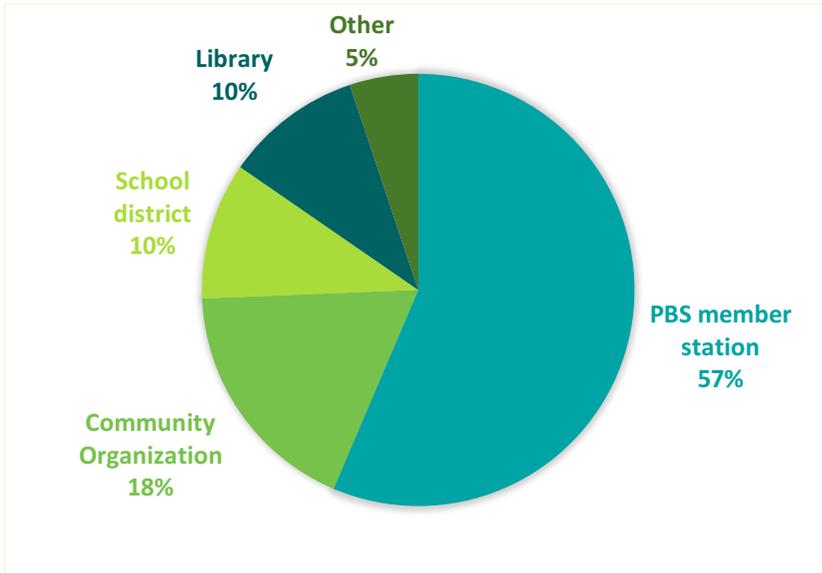
Most parents reported that their children spent about 30 to 180 minutes a day using technology, with a median of 60 to 120 minutes a day. The majority of parents/caregivers reported spending less than 30 to 120 minutes with their child while that child was using technology, with a median of 30 to 60 minutes a day. Appendix F provides more detail on time spent with technology by child and parent/care provider. In the 25 parent conversations conducted during the first ScratchJr FCL Workshop session, few parents (24%) reported using educational apps at home. Thirty-six percent of parents mentioned that they or their family had prior experience with coding. Only 8% of parents reported that their family had prior experience with Scratch or ScratchJr.

During the first session, researchers also asked what educational activities families engaged in at home. The majority of families (60%) reported that they engage in reading and writing activities at home. Fewer parents (36%) stated that they engage in science learning activities at home; 76% of parents interviewed during the first session also reported engaging in other educational activities, such as math learning activities, board games, and puzzles.

Facilitators and Administrators

A total of 39 facilitators completed the survey. While ScratchJr FCL Workshop facilitators were drawn from stations as well as from a variety of partner organizations, more than half of facilitators who completed the survey were employed by PBS member stations. Figure 1 provides information regarding facilitators' reported workplaces.

Figure 1. Facilitator Workplace (N = 39)



In addition to facilitators, researchers also interviewed station and partner organization administrators who oversaw FCL Workshop work at each of the five site-visit CC-ELM. A total of 11 facilitators and 9 administrators participated in interviews. As with the facilitator survey, most interview respondents (15 of 20) were station employees, as opposed to employees of community partner organizations.

Results

Implementation

RQ1. To what extent did facilitators implement the PBS KIDS ScratchJr FCL Workshop model as designed by PBS KIDS for the CPB-PBS Ready To Learn Initiative?

Target community demographics were aligned with the FCL Workshop model. Workshop strengths included family enjoyment and engagement, and continued use of ScratchJr.

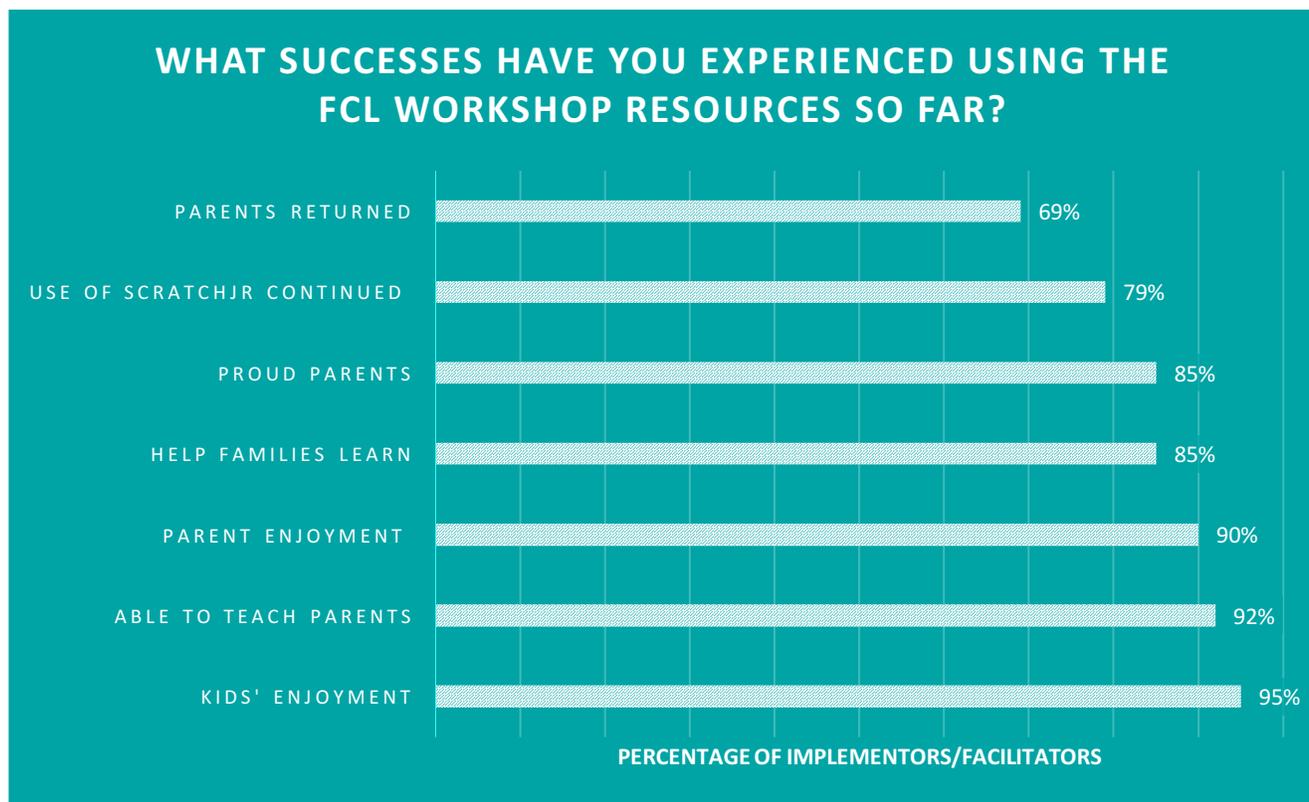
The primary goal of the FCL Workshops is to support and engage families in creating and learning together, using PBS KIDS ScratchJr and a related set of technology and media tools. FCL Workshops are targeted to low-income and underserved families.

The workshop successes endorsed most frequently by facilitators (N=39) were

- children's and parents' enjoyment (95% and 90% facilitator surveys, respectively),
- the ability to teach parents (92%),
- proud parents (85%),
- helping families learn (85%), and
- parents/caregivers and kids who participated in the workshops indicated that they would continue using ScratchJr at home (79%).

Site visitors noted additional workshop strengths, including a high level of family engagement (100% of five stations), and strong facilitator-family rapport (60% of five stations).

Figure 2. Successes in Using FCL Workshop Resources Reported by Facilitators (N = 39)



Most facilitators agreed that the ScratchJr FCL Workshop plans were clear and easy (87%), and well-prepared (77%). Technology did not pose a barrier to implementation for most stations.

Another indicator of implementation quality is staff availability to support the workshop activities and participants. On the facilitator survey, the majority of facilitators (95%) reported having between one and five other staff members working with the children during the ScratchJr FCL Workshop sessions.

RQ2. What aspects of the PBS KIDS ScratchJr FCL Workshop model did families value, and why?

Families felt that the workshop provided them with useful information. They found the subject matter interesting and the workshops enjoyable.

Surveys and informal conversations suggest that parents valued the ScratchJr FCL Workshops, and appreciated the opportunity to participate in them with their children. All parents completing the post-survey (100% of 77) agreed that the ScratchJr FCL Workshop was friendly and welcoming, and provided them with useful information. Nearly all parents (97%) reported that they and their children enjoyed the ScratchJr FCL Workshop, and that they were likely to recommend the workshop to a friend. Informal conversations suggest

that families valued both the coding content associated with ScratchJr, as well as the FCL Workshop model more broadly: Families stated that they were interested in the subject matter and in learning associated skills such as coding (49% of 45 informal conversations³), and that they valued the opportunity for fun and enjoyment (36% of informal conversations).

Results from the post- survey also indicate that parents valued the PBS ScratchJr app; nearly half of parents and caregivers (48% of 77) reported that they had downloaded ScratchJr at home, while an additional 42% of parents reported that they had not downloaded ScratchJr yet, but were planning to. Only 4% of parents reported not downloading ScratchJr. because they were unable to.

RQ3. What aspects of the PBS KIDS ScratchJr FCL Workshop model were challenging for families, and why?

No challenges were predominant. Some families felt that the workshops focused on too many topics.

While families did report challenges with the ScratchJr FCL Workshop, no particular challenges were prevalent across families. For example, 23% of 77 parents who responded to the survey thought that the workshop focused on too many topics. However, the majority of parents (71%) did not feel this way.

Challenges for families varied by station. For example, one FCL Workshop began shortly after the end of the school day. At that station, three parents reported that it was a challenge to balance workshop scheduling with their work obligations. Some FCL Workshops included families who did not all speak English. This challenge was addressed in various ways, including having an interpreter translate for parents using a headset system, or having a facilitator provide on-the-spot translations during workshop presentations.

RQ4. What aspects of the PBS KIDS ScratchJr FCL Workshop model were challenging for stations/partners, and why?

Most facilitators were satisfied with the ScratchJr FCL Workshop model. A few facilitators reported minor challenges with child behavior, workshop space, and materials arriving late, among other things.

³ This count does not necessarily represent unique families; families who expressed the same theme at interviews during the first and last session of the workshop may have been double-counted.

Facilitator interviews and surveys suggest that most facilitators were satisfied with the workshops. Here we discuss the few areas where five or more facilitators (of 39 who completed surveys) reported challenges.

Facilitators who completed the survey identified two challenges regarding participants: child behavior (41%) and parent resistance (26%). Implementation challenges included limited workshop space (38%), and insufficient planning time (15%). In 8 of 45⁴ interviews and in open-ended survey responses, facilitators indicated that they would like to change the balance of instructional activities—for example, to include more hands-on activities and less direct instruction. In 7 of 45⁵ interviews and open-ended survey responses, facilitators said they did not receive the ScratchJr FCL Workshop materials before their workshop began, and that conducting the workshop without the materials posed challenges. Minor technology challenges included insufficient technical support (11%⁶) and slow Internet connectivity (11%⁷).

RQ5. How do adults and children interact with one another, and with technology, during the PBS KIDS ScratchJr FCL Workshop?

Most families appeared engaged in the sessions. Children usually controlled the device, and parents talked with children occasionally. Families' projects demonstrated the ability to use some basic ScratchJr features.

We conducted 35 family observations across the first and last ScratchJr FCL Workshop sessions. Families appeared engaged in 29 of those observations⁸. Site visitors often noted a high level of family engagement as a workshop strength. In the majority of the observations (60%), researchers noted that children were the primary drivers of activities on the tablets; they made most of the moves in ScratchJr. This could be attributable to the way that some stations framed the ScratchJr FCL Workshop; for example, at one site, facilitators emphasized that children are “in charge” of their parents during the workshop. We were able to code the degree of parent-child conversation in 27 of the observations: Conversation was coded as *none apparent*, *occasional*, or *frequent*. In 59% of the 27 coded observations, parents and children conversed occasionally, and they conversed frequently in another 30%.

⁴ This count does not necessarily reflect unique facilitators. The same facilitator may have indicated the same viewpoint in both his/her survey and his/her interview, and thus may be double-counted.

⁵ Ditto.

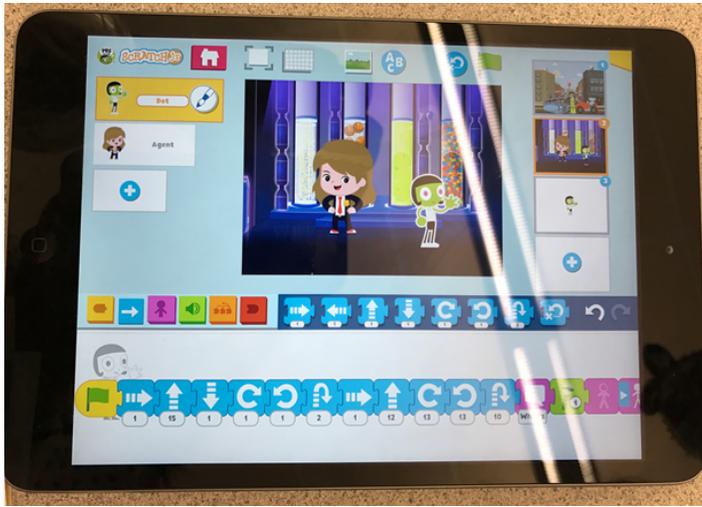
⁶ Ditto.

⁷ Ditto.

⁸ Observation counts in this section do not necessarily reflect unique families, because many of the same families were observed twice—at the first session and at the last session.

To investigate how families interacted with technology (i.e., carried out actions using the tablet, such as playing or creating an animation, or recording an image or sound), we analyzed images of 16 families' projects as of the fourth session (see Figure 3 for a sample). Most families' projects demonstrated an ability to use basic components of ScratchJr, including the ability to join multiple, unique blocks (94%), and to add multiple characters (88%). About half of the projects we analyzed (44%) demonstrated the ability to add multiple pages/backgrounds in a single project.

Figure 3. Sample PBS KIDS ScratchJr Learning Artifact



Note. Clockwise, starting at top left, images represent characters, the current scene, project pages, and a script of coding blocks.

Child Outcomes

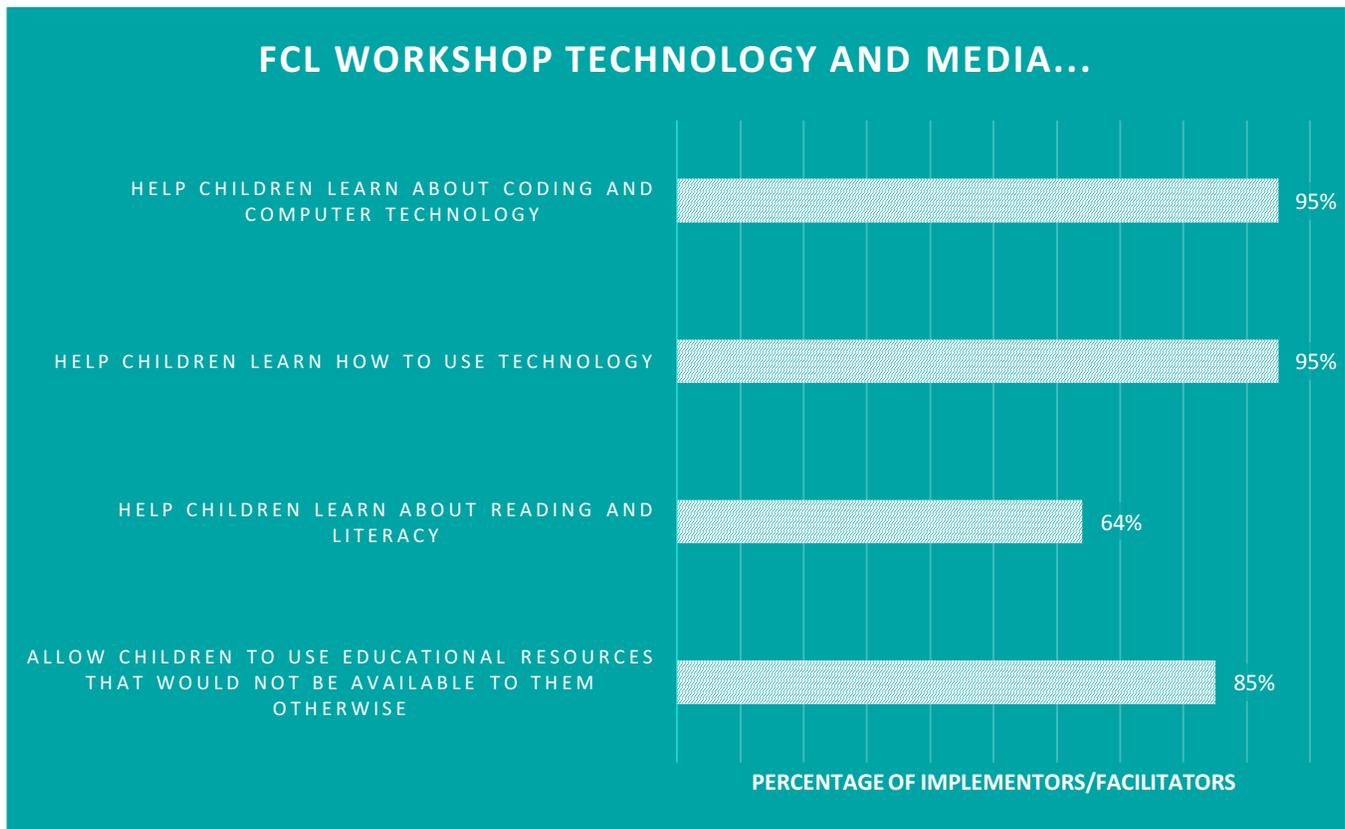
RQ6. To what extent did adults (parents/caregivers and facilitators) find that children developed new literacy and computational thinking skills through their PBS KIDS ScratchJr FCL Workshop participation?

Parents and facilitators reported that the workshop helped children develop skills for using technology.

In informal conversations conducted with parents during the last ScratchJr FCL Workshop session, 80% of 20 parents reported that the workshop taught their child skills for using ScratchJr and/or coding. For example, one parent said, "They've been learning backgrounds, characters, pathways, and cards for programming." Ten parents said their child learned non-technical skills (e.g., following directions, collaboration, storytelling) from the workshop.

Nearly all facilitators surveyed agreed that the ScratchJr FCL Workshop helped children learn how to use technology (95% of 39), as well as coding and computers (95%). The majority of facilitators (85%) agreed that ScratchJr FCL Workshop technology and media allow children to use education resources that would not be available to them otherwise. More than half of facilitators (64%) agreed that the workshops' technology and media helped children learn about reading and literacy. Figure 4 depicts these findings.

Figure 4. Child Technology and Media Outcomes Reported by Facilitators (N = 39)



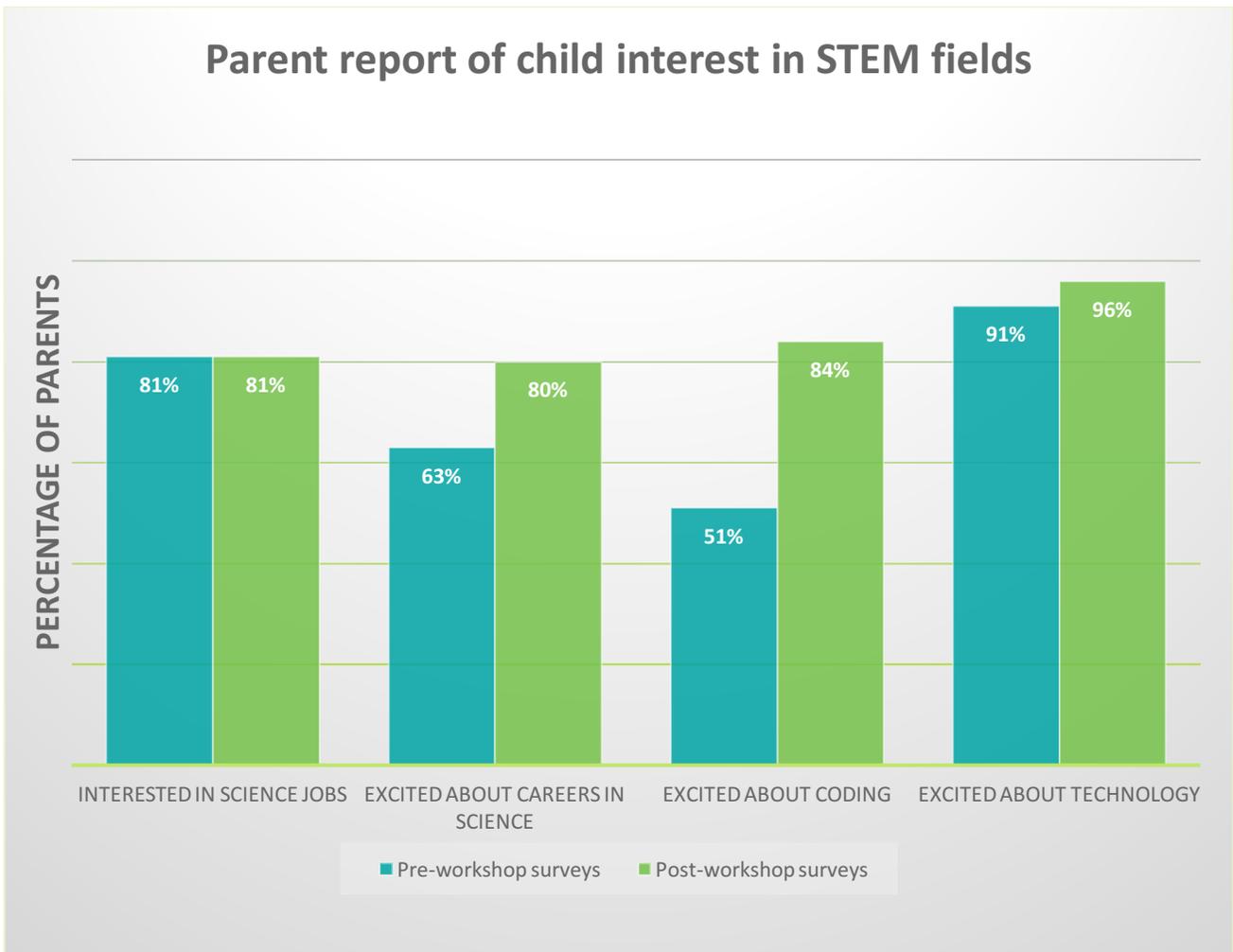
RQ7. To what extent did adults (parents/caregivers and facilitators) find that children’s perceptions and attitudes toward new literacy and coding/computational thinking were positively influenced through their PBS KIDS ScratchJr FCL Workshop participation?

The percentage of parents/caregivers who reported that their child is interested in science jobs and computer programming increased from the first to the last workshop.

As shown in Figure 5, below, the percentage of parents/caregivers reporting that their child is excited about careers in science increased from 63% before the workshop to 80% (of 70) after the workshop. Likewise, the percentage of parents reporting that their child is interested in computer coding or programming increased from 51% before the workshop to 84% after the workshop, and the percentage of parents reporting that their child is excited about technology increased from 91% to 96%. The percentage of parents/caregivers who

reported that their child was excited about science jobs (77%), reading, writing, or literacy (83%) remained unchanged from the first to the last session. We suggest these high baseline rates likely are representative of parents who chose to participate in a ScratchJr experience because their children already had some interest in science or technology. However, it is also interesting to note that, despite this pre-existing interest, parent reports indicated a positive shift in the number of children interested in science careers and in programming and coding after participating in the workshop.

Figure 5. Parent Pre- and Post- Report of Child Interest in STEM Fields (N = 70)



Note. Percentage of parents is out of a total of 70 parents who completed the pre- and post- surveys.

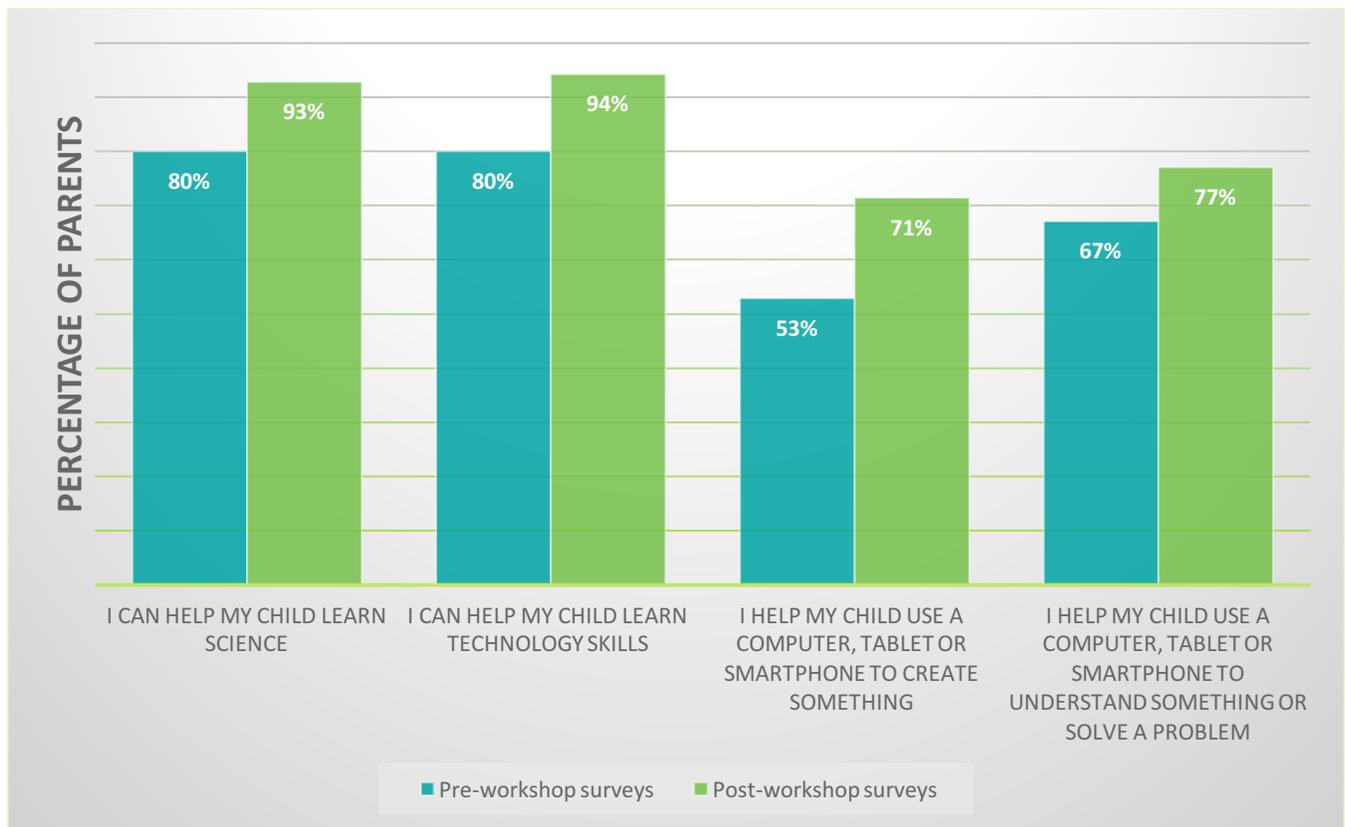
Parent/Caregiver Experience

RQ8. To what extent did parents/caregivers develop confidence during the workshop that they could support their children’s learning of new literacies and computational thinking?

Parents felt they learned something from the workshop. Parent-reported confidence and use of technology with their child increased slightly.

Parents reported that the workshop was educational for them and increased their confidence in helping their child learn. During interviews in the final session, 75% of 20 parents reported that they learned something during the workshop. From the pre-workshop survey to the post-workshop survey, the percentage of parents/caregivers who reported that they felt confident about supporting their child’s science learning increased from 80% to 93% (of 70), and those reporting confidence in technology skills increased from 80% to 94%. Additionally, the percentage of parents who reported that they helped their child use technology to create something increased from 52% at the pre-workshop survey to 71% at the post-workshop survey. Finally, the percentage of parents who reported that they helped their child use technology to understand something or to solve a problem increased from 67% at the pre-workshop survey to 77% at the post-workshop survey (see Figure 6).

Figure 6. Pre- and Post- Report of Parent Confidence (N = 70)



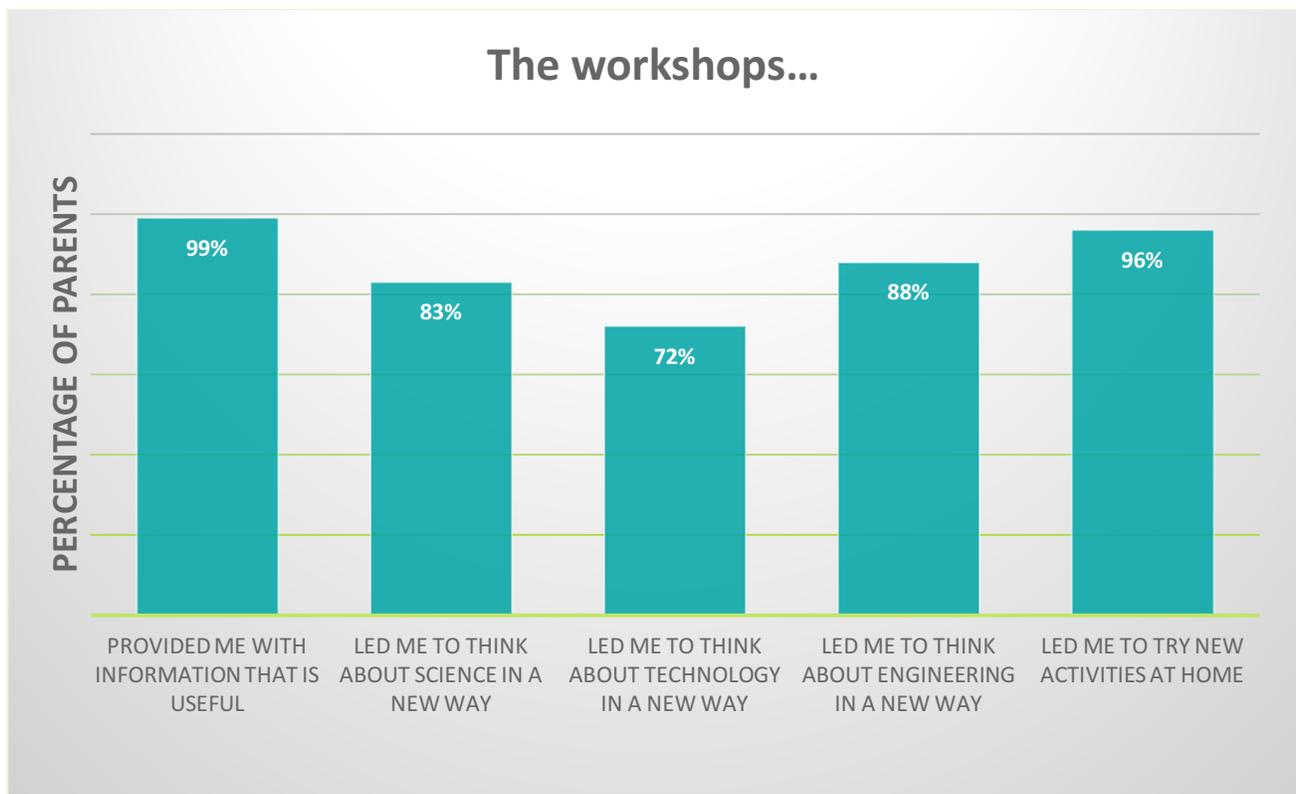
Note. Percentage of parents is out of a total of 70 parents who completed the pre- and post- surveys.

RQ9. To what extent did parents/caregivers develop new perceptions/attitudes toward new literacies and computational thinking?

Parents reported that the ScratchJr FCL Workshop led them to think about science and technology in a new way. Most parents held favorable opinions about the role of science and technology in children’s learning.

On surveys administered during the last workshop sessions, most parents reported that the ScratchJr FCL Workshop made them think about a number of topics in a new way (see Figure 7, below). For example, 83% (of 77) parents reported that the workshops led them to think about technology in a new way, while 88% reported that the workshop led them to think about engineering in a new way. Parents also said that the workshops led them to think about technology in a new way (72%), and that the workshop led them to try new activities at home with their children (96%). These items assess parents’ impressions of changes in their attitudes toward science and engineering, which may be subject to bias; these items do not directly assess changes in parent attitudes.

Figure 7. Workshop Outcomes Reported by Parents (N = 77)



There was no change from pre-workshop survey to post-workshop survey in parents' belief that technology plays a role in children's learning, perhaps because most parents (91% of 70) already believed this at the start of the workshop. In interviews at the first and last workshop sessions, the predominant perception among parents was that coding expands a child's future career potential. For example, one parent commented, "It's a good skill that they will be able to use in the future, and it's complicated, so better to learn when they're young." Parents articulated similar views about coding almost equally during the first session (44% parents of 25) and during the fourth session (45% parents of 20). Some parents (11% of 45 interviews across the first and last sessions⁹) also described a new appreciation for their child's coding capacity as a result of the workshop, such as, "I wouldn't have thought about a six-year-old learning how to code. I did it in high school, but not as a six-year-old."

Stations and Community Partners

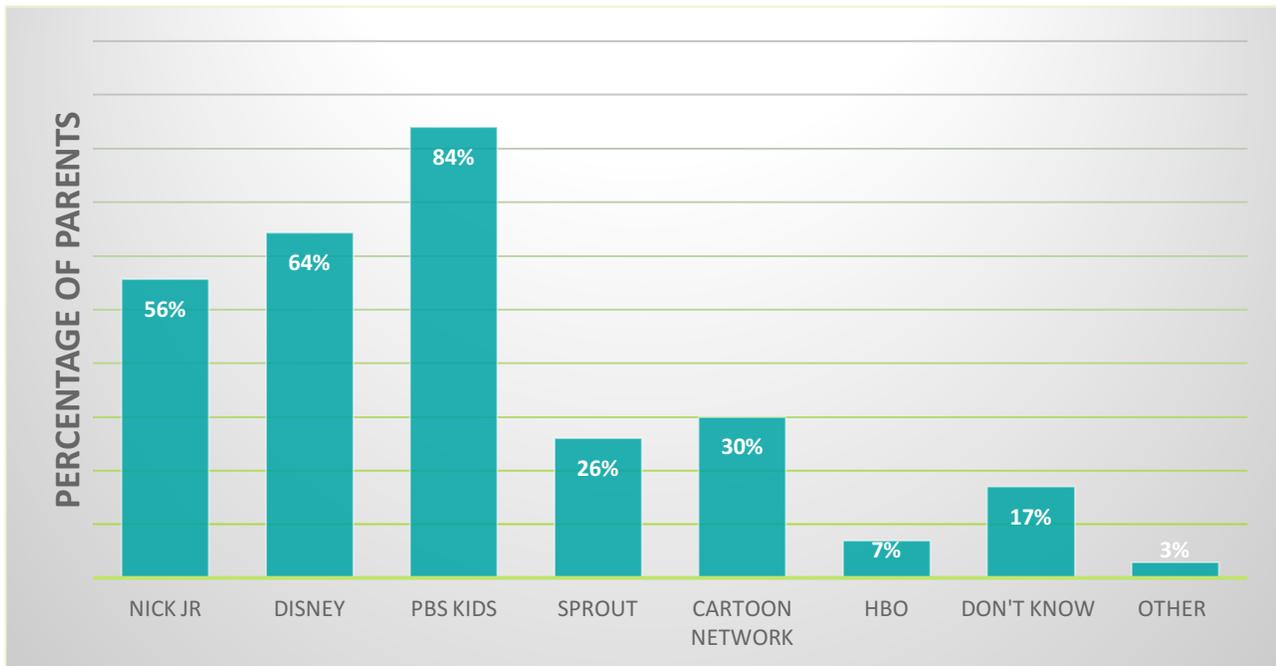
RQ10. How, if at all, did families' connections to local public media stations change immediately following the PBS KIDS ScratchJr FCL Workshop experience?

Parents reported strong connections to public media both before and after the ScratchJr FCL Workshop experience. Facilitators and administrators felt that the ScratchJr FCL Workshop strengthened the relationships between local public media stations and families.

On parent surveys, families reported strong connections to their public media station both before and after the ScratchJr FCL Workshop. At the first session, more parents reported that their child watched PBS KIDS than any other channel (84% of 115 parents; see Figure 8, below) and ranked PBS as the most educational channel. At the end of the workshops, almost all of the participating parents (98% of 77) reported that they considered their local PBS stations to be a resource.

⁹ This count does not necessarily represent unique families; families who expressed the same theme at interviews during the first and last sessions of the workshop may have been double-counted.

Figure 8. Parents' Reports of Television Channel Watched Most Frequently by Child (N = 115)



The idea that the ScratchJr FCL Workshop builds lasting relationships with families came up in 33% of 39 facilitator surveys, 77% of 9 administrator interviews, and 45% of 11 facilitator interviews. Only one parent mentioned this. To create those lasting relationships, five administrators described making efforts to establish rapport with families before the start of the workshop.

RQ11. To what extent are facilitators, public media stations, and their community partners better prepared to support new literacies, engineering, and computational thinking as a result of this PBS KIDS ScratchJr FCL Workshop experience?

Facilitators and administrators stated that the ScratchJr FCL Workshop experience enhanced their capacity for community engagement, chiefly by providing stations with printed resources and by fostering new partnerships. One station specified that the ScratchJr experience supported its STEM programming.

When asked how they benefitted from the ScratchJr FCL Workshop experience, facilitators and administrators most often stated that the ScratchJr FCL Workshop enhanced their capacity to help their community (54% of 54 interviews and open-ended survey responses¹⁰). For example, one station employee

¹⁰ Counts in this section do not necessarily reflect unique facilitators and administrators. The same facilitator may have indicated the same viewpoint in both their survey and their interview, and thus may be double-counted.

said that ScratchJr FCL Workshops allowed her station to expand its reach into new neighborhoods and schools, while continuing the station’s existing work in early childhood and STEM. Some facilitators (15%) felt that the ScratchJr FCL Workshop would positively affect how they implement future programming or forge future partnerships (e.g., by using the resources or using evaluation data to improve programs).

Facilitators and administrators reported two predominant means by which the ScratchJr FCL Workshop had increased their capacity: by providing printed resources (52%), and by fostering partnerships (22%). For example, one station staff member praised the printed materials, saying that the station could now train community partners and supply them with printed materials to facilitate workshops independently. The interviewee felt this would have been less feasible in the past, when workshops used documents from a project management and repository system “that we can’t keep up with.” While these printed materials may increase FCL Workshop sustainability, station administrators also noted that funding was a major potential limiting factor to continuing FCL Workshop beyond the current funding cycle.

RQ12. To what extent are facilitators, public media stations, and their community partners better prepared to support the integration of media and/or technology as learning supports as a result of this PBS ScratchJr FCL Workshop experience?

Facilitators and administrators reported that the ScratchJr FCL Workshop experience improved the amount or quality of technology they had available for use in programming, enhanced staff skillsets for supporting technology use, and allowed them to cross-promote other PBS KIDS programs and apps.

In 26% of interviews and open-ended survey responses, facilitators and administrators reported that the ScratchJr FCL Workshop had improved the amount or quality of technology available to them for use in community programming. In addition, some facilitators and administrators reported that the ScratchJr FCL Workshop improved staff skills for supporting technology (13%), and that the ScratchJr FCL Workshop expanded stations’ capacity to cross-promote other PBS KIDS programs and apps (13%).

RQ13. How, if at all, did the connection between public media stations and community partners change following the PBS KIDS ScratchJr FCL Workshop experience?

Facilitators and administrators did not address the connection between public media stations and community partners during interviews or in responses to survey questions.

During informal conversation, some facilitators and administrators discussed being very caught up in the planning and recruitment processes necessary to run the ScratchJr FCL Workshop within the timeframe

provided. Few facilitators or administrators mentioned anything specific about partners unless challenges arose such as managing partner school schedules or reconsidering a partner relationship in the context of an older target child population for the workshops.

Discussion

The PBS KIDS Family Creative Learning (FCL) Workshops aim to support and engage families in creating and learning together. This new program builds on years of Ready To Learn research and program implementation targeting the use of digital tools as supports for young children’s learning. Key findings from these and other studies point to the essential role that parents and family members play in young children’s learning, the ways in which digital tools can be leveraged through integration to support learning goals, and the structures that best support digital media use in formal and informal learning settings. These Workshops, enacted by 16 Community Collaboratives for Early Learning and Media around the country, center on a series of experiences for parents/caregivers, their children aged 5–8 years old, and siblings. The FCL Workshop model is still emerging; this study presents initial implementation data on stations’ experimental, initial Workshop implementations.

The purpose of this study is to help local public media stations, CPB, and PBS better understand how they are reaching their target audiences, how they are working with community partners, and how the program’s structures can be improved to support program goals and expectations. Families engaged in, and enjoyed, the workshops; parents and facilitators reported that children learned new skills; parents reported that they themselves also learned from the workshops; and local public media station staff and their partners reported that the ScratchJr FCL Workshop increased their capacity to serve the community. Below we highlight findings in greater detail.

- **Implementation.** Families found the subject matter interesting and the workshops enjoyable. Most families appeared engaged with one another and within the session. Most facilitators were satisfied with the FCL Workshop model, noting family enjoyment as a major strength.
- **Child outcomes.** Parents and facilitators reported that the workshop helped children develop skills for using technology, and may have increased children’s awareness of, and interest in, careers in computer science/programming.
- **Parent/caregiver experience.** Parents reported that they learned from the workshop, and that the workshop led them to think about science and technology in a new way, as well as to try new activities at home. Most parents held favorable opinions about the role of science and technology in children’s learning, even at the first session.
- **Stations and partners.** Families reported strong connections to public media both before and after the ScratchJr FCL Workshop. Facilitators and administrators felt that the ScratchJr FCL Workshop

enhanced their capacity for community engagement, chiefly by providing stations with printed resources and by fostering new partnerships. They also stated that the ScratchJr FCL Workshop improved their capacity to use technology in community work.

Limitations

Four primary limitations should be considered when drawing conclusions from this implementation study: (1) variations in implementation suggest that this study was not evaluating a single, consistent approach to ScratchJr FCL Workshop implementation; (2) findings may not represent all families or CC-ELM; (3) data do not include objective measures of child learning outcomes; and (4) this study cannot make claims about causation.

CC-ELM varied in how they implemented the ScratchJr FCL Workshop and study measures. These variations may have led to differential impacts, which could have skewed our data. For example, three CC-ELM implemented the program in three sessions instead of four, and one CC-ELM implemented all sessions during a single week. Further, we cannot ensure that all stations administered the parent survey at the start of the first session and at the end of the last session. Pre- surveys could reflect parents' experience during the first session, and post- surveys could reflect parents' experience before completing the fourth session.

Findings may not be representative of all families who participated in the ScratchJr FCL Workshop. Some parents could not take the parent survey because they did not speak English or Spanish; the survey was available only in those two languages. Similarly, some families could not participate in informal conversations or observations with researchers because they did not speak English (or Spanish, when a translator was present, or when a researcher fluent in Spanish was available). Interviews and observations were conducted at 5 of 16 CC-ELM; data from these sources may not represent all CC-ELM. Finally, comparisons of pre-workshop to post-workshop surveys are possible only in instances in which the same parent/caregiver took both surveys (i.e., they exclude instances where a different parent/caregiver took the pre- and post- surveys). Thus, many participating families were excluded from these comparisons (45 pre- and 7 post-).

This study did not include any data collection with children, including child learning. Instead, this study uses parent and facilitator reports of child outcomes. Therefore, findings do not speak directly to child outcomes; rather, they represent parents' and facilitators' perceptions of child outcomes.

This study was not designed to determine causation. The study did not include a comparison group to rule out alternate explanations for reported outcomes.

Recommendations

Program design and expectations. Local public media stations and their partners varied in their approaches to implementing the ScratchJr FCL Workshop. To support all CC-ELM in providing quality learning experiences for families, FCL Workshop developers are encouraged to highlight which elements of the FCL Workshop model should not be modified, and which can be altered to meet local needs. For example, is it essential that FCL Workshops occur over four weekly sessions, as opposed to four consecutive days? Non-modifiable characteristics should be identified based on FCL Workshop goals for families. Identifying these characteristics not only will support quality family experiences, but also will ensure that future evaluations test a consistent model of FCL Workshops across CC-ELM.

Working with an English learner community. FCL Workshop design also should attend to the needs of non-English-speaking families. ScratchJr FCL Workshop materials are available in English and Spanish, and our research team observed one station making heavy use of the Spanish-language materials with parents. However, more work is needed to make FCL Workshop content accessible to families who speak other languages. CC-ELM target audiences speak a wide range of languages; translating materials into each would be cost-prohibitive. Rather, FCL Workshop materials should include resources to build CC-ELM capacity for working with non-native–English speakers¹¹.

Perspectives and experiences with technology. In the theory of change document (see Appendix A), ScratchJr developers note that addressing parent fear and anxiety about technology might be a worthwhile area of focus during the FCL experience. As the program evolves and facilitators become more comfortable with the FCL Workshop model, we suggest that addressing parents' discomfort with, or lack of knowledge about, technology and coding might help to support more joint engagement between child and parent during sessions.

Station implementation. Many station staff reported that the process of recruitment and preparation for these new workshops (including securing a location, preparing technology and other hands-on materials, identifying an adequate number of staff/facilitators, ordering and serving food, facilitating transportation for families, and so on) were time-consuming and challenging. The time and energy needed to ensure that these elements of the program were addressed may have affected overall preparedness of facilitators regarding the program's content. In some instances, facilitators seemed unclear about the instructional or learning goals of the ScratchJr experience, or were not prepared to describe these goals for the parents and children attending the FCL Workshop event. Researchers recognize the multiple challenges associated with

¹¹ For example, see <https://www.edutopia.org/blog/esl-ell-tips-ferlazzo-sypnieski> and <http://blog.tesol.org/six-strategies-for-teaching-ells-across-the-content-areas/>

implementing this complex multi-generational experience, and anticipate that the general demands on staff time for program set-up will decrease as station staff become familiar with the overall FCL Workshop model, and with ScratchJr in particular. As this process unfolds, we suggest that stations work with their facilitators to ensure that the goals of the FCL Workshop are clearly articulated to parents and to children, and that a clear pathway is evident from the articulated goals to the hands-on activities in which parents and children engage.

Implications

This study presents findings from a first-year implementation of a large-scale model seeking to reach an audience that is broad, multi-generational, multi-lingual, and multi-ethnic. It is likely that findings from this initial implementation will inform future iterations of the program as it continues to expand and reach a complex target audience.

The ScratchJr FCL Workshop experience included many components that parents, children, and facilitators identified as engaging and positive. Informally, parents and facilitators told researchers that this kind of community-based learning experience, where parents and children come together to learn something new in a relaxed, supportive, and informal environment, is unique and welcome.

The FCL model offers something unique among out-of-school programs: opportunities for children and parents to engage in informal learning together for a sustained period, with a clear goal and purpose. Families have few sustained opportunities to learn together. Opportunities for whole families to participate in multi-session workshops are rarer still. The FCL Workshop model is grounded in the idea that child development is nested within a family environment that often includes parents, grandparents, and siblings. In early and middle childhood, addressing the whole child necessitates acknowledging the child's family as a key learning context.

With this initial year of implementation completed, the ScratchJr FCL Workshop is poised to have broader impact on communities: Workshop materials are finalized and are available to all CC-ELM, and station staff are familiar with the workshops' expectations for parents, children, and facilitators, and also understand the workshops' requirements for space and other resources. The outreach experience that local public media stations will develop over repeated implementations of the FCL model not only will enhance FCL Workshops; it may also provide groundwork for future STEM or other multigenerational programming experiences.

We anticipate that future rounds of data collection from FCL Workshops will provide a more varied and deeper view of FCL Workshop experiences for children and their families. We anticipate the data also will provide more information about implementation, as well as more generalizable outcomes for the FCL

Workshops and station communities, thus helping to improve overall implementation and outreach to both families and partner organizations. While still in its formative state, the FCL Workshop model shows promise as an approach to bringing multigenerational programming to communities where resources may be limited, and as a foundation-building experience for young learners as they explore new concepts and technologies.

Appendix A. Theory of Change

The research design drew on the description of the intervention created by PBS KIDS for the CPB-PBS Ready To Learn Initiative. This material came from PBS KIDS resource design documents and is included here to provide context.

Creating projects with PBS KIDS ScratchJr is an approach to the development of computational thinking skills that champions the process of engaging in the interest-driven imagining, designing, creating, and sharing of computational artifacts (PBS KIDS ScratchJr projects, in this instance).

As families engage in creative coding with the PBS KIDS ScratchJr app, they have an opportunity to create and express themselves through their use of transmedia, as opposed to playing/watching with technology devices. In the process, they are empowered to solve problems, design their own projects, and begin developing computational thinking skills and practices that are foundational for later academic success.

There are two sides to these creative/coding focused goals. One is an inward mindset strengthening/shift—that families see themselves as people who can create and express themselves using transmedia. The other side of the same coin is wanting them to see technology as tools that can be used for creativity and expression, and not just a set of devices for playing games and watching TV.

Equally, if not more important, is how family dynamics are affected by the series. Families will be engaging with one another in a set of collaborative experiences that hopefully provide them with some new and meaningful ways to interact with one another. Are there shifts in how kids view the roles that they can play within their family dynamic, especially when engaging with technology? Are there shifts in the way kids view their siblings and parents and the roles that they play? Do parents experience similar shifts in how they view their role and how they view the roles of their children? Have they discovered and begun developing any new mindsets and ways of supporting their kids' learning and development? Do families recognize public media as a catalyst for more home-based co-play and science/literacy-rich activities?

It would also be worthwhile to consider looking at anxieties and apprehensions as experienced by adult participants in the workshop series. Experiences that involve coding, science, and open-ended workshop formats may be unfamiliar and may cause anxiety or nervousness among family members. How do the parents and facilitators feel at the start of the series, and does that feeling shift over the course of the four weeks? Did participation in the ScratchJr FCL Workshop enhance

parents' views of what engineering and programming are, and how they and their children can engage with content that addresses this? Do they better understand how inquiry, problem-solving, and the design process can play a role in engineering and programming, as well as in other everyday activities in which children engage?

And finally, with all three of the stakeholder groups involved, we will measure the engagement level of the experience. Is it fun? Are the activities age-appropriate for children ages 5–8, as well as for their siblings and parents/caregivers? Are the right supports in place for families to learn and succeed? For the facilitators, did they feel like they had all the support/information/tools to confidently and effectively facilitate the series?

Appendix B. Research Questions

The aim of this study was to understand how families engage with the PBS KIDS ScratchJr FCL Workshop, and the extent to which the PBS KIDS ScratchJr FCL Workshop produces the intended outcomes for families, children, public media stations, and their community partners.

The following research questions guided the study.

Implementation

- RQ1. To what extent did facilitators implement the PBS KIDS ScratchJr FCL Workshop model as designed by PBS KIDS for the CPB-PBS Ready To Learn Initiative?
- RQ2. What aspects of the PBS KIDS ScratchJr FCL Workshop model did families value, and why?
- RQ3. What aspects of the PBS KIDS ScratchJr FCL Workshop model were challenging for families, and why?
- RQ4. What aspects of the PBS KIDS ScratchJr FCL Workshop model were challenging for stations/partners, and why?
- RQ5. How do adults and children interact with one another, and with technology, during the PBS KIDS ScratchJr FCL Workshop?

Child Outcomes

- RQ6. To what extent did adults (parents/caregivers and facilitators) find that children developed new literacy and computational thinking skills through their PBS KIDS ScratchJr FCL Workshop participation?
- RQ7. To what extent did adults (parents/caregivers and facilitators) find that children's perceptions and attitudes toward new literacy and coding/computational thinking were positively influenced through their PBS KIDS ScratchJr FCL Workshop participation?

Parent/Caregiver Experience

- RQ8. To what extent did parents/caregivers develop confidence during the workshop that they could support their children's learning of new literacies and computational thinking?
- RQ9. To what extent did parents/caregivers develop new perceptions/attitudes toward new literacies and computational thinking?

Stations and Community Partners

- RQ10. How, if at all, did families' connections to local public media stations change immediately following the PBS KIDS ScratchJr FCL Workshop experience?

- RQ11. To what extent are facilitators, public media stations, and their community partners better prepared to support new literacies, engineering, and computational thinking as a result of this PBS KIDS ScratchJr FCL Workshop experience?
- RQ12. To what extent are facilitators, public media stations, and their community partners better prepared to support the integration of media and/or technology as learning supports as a result of this PBS ScratchJr FCL Workshop experience?
- RQ13. How, if at all, did the connection between public media stations and community partners change following the PBS KIDS ScratchJr FCL Workshop experience?

Table 4 illustrates how research questions align with outcomes, and the participants whose data informed each question.

Table 4
Participant, Facilitator, and Station Experience

Outcome	Children	Parents/ Caregivers	Facilitators	Stations	Community Partners
New literacy, engineering, and computational thinking skills	RQ6		RQ11	RQ11	
Positive perceptions and attitude toward new literacy, engineering, and computation	RQ7	RQ9			
Increased preparation and confidence to support children’s learning		RQ8		RQ11	RQ11
Perceptions/attitudes toward the PBS KIDS ScratchJr FCL Workshop	RQ2 RQ3	RQ2 RQ3	RQ4	RQ4	
Connection with public media stations		RQ10	RQ13		
Connection with community partners				RQ13	RQ11

Research questions are aligned to questions from PBS and CPB (see Theory of Change, Appendix A), as illustrated in Table 5.

Table 5
Research Question Alignment with PBS Goals

Question from the ScratchJr FCL Workshop design document	Research Question
How engaged are parents and children? Is it fun? Are the activities age-appropriate? Are the right supports in place for families to learn and succeed?	RQ2. What aspects of the PBS KIDS ScratchJr FCL Workshop model did families value, and why? RQ3. What aspects of the PBS KIDS ScratchJr FCL Workshop model were challenging for families, and why?
Are there shifts in the way kids view their siblings and parents and the roles that they play?	RQ5. How do adults and children interact with one another, and with technology, during the PBS KIDS ScratchJr FCL Workshop?
Are there shifts in how kids view the roles that they can play within their family dynamic, especially when engaging with technology?	RQ5. How do adults and children interact with one another, and with technology, during the PBS KIDS ScratchJr FCL Workshop?
Have parents discovered and begun developing any new mindsets and ways of supporting their kids’ learning and development?	RQ8. To what extent did parents/caregivers develop confidence during the workshop that they could support their children’s learning of new literacies and computational thinking?
Do parents experience shifts in how they view their role and how they view the roles of their kids?	RQ5. How do adults and children interact with one another, and with technology, during the PBS KIDS ScratchJr FCL Workshop?
Did participation in the FCL Workshop enhance parents’ views of what science, engineering, and programming are, and how they and their children can engage with content that hits on all three?	RQ9. To what extent did parents/caregivers develop new perceptions/attitudes toward new literacies and computational thinking?
Did facilitators feel like they had all the support/information/tools to confidently and effectively facilitate the series?	RQ12. To what extent are facilitators, public media stations, and their community partners better prepared to support the integration of media and/or technology as learning supports as a result of this PBS KIDS ScratchJr FCL Workshop experience?
How do the parents and facilitators feel at the start of the series, and does that shift at all over the course of the four weeks?	RQ13. How, if at all, did the connection between public media stations and community partners change following the PBS KIDS ScratchJr FCL Workshop experience?

Appendix C. Data Collection Activities

Data collection activities included parent/caregiver surveys, family observations, informal parent/caregiver conversations, facilitator surveys, interviews with PBS KIDS ScratchJr FCL Workshop facilitators and administrators, and learning artifacts.

Parent/Caregiver Surveys

Researchers worked with all 16 CC-ELM to distribute a survey to all participating families at the start of the first workshop session and at the end of the fourth or final workshop session. Surveys were created using Qualtrics software. Use of the software allowed researchers to include response features such as question and response order randomization, as well as skip and branch logic. Surveys were administered using the Qualtrics iPad app. The Qualtrics app allowed for survey data to be securely uploaded to the database, which was accessible to researchers remotely via the Internet. Stations and participants had no access to survey responses or to data of any kind. Each station received iPads with the app pre-loaded onto them. Stations attended webinars that provided information about survey administration, such as including adequate time for survey completion. Each station also participated in a one-on-one tutorial on how to administer the surveys. Researchers distributed sets of eight tablets with surveys already loaded for stations to distribute to family members for survey completion. Data were uploaded to a server for analysis once the tablets were connected to WiFi.

All parents and caregivers at the 16 sites were invited to complete pre-workshop and post-workshop surveys. The pre-workshop survey was administered at the beginning of the first workshop session, and the post-workshop survey was administered at the end of the final (typically fourth) workshop session. Thus, data were collected only from parents/caregivers who attended the first and/or last workshop session and agreed to complete a survey. If more than one parent/caregiver attended the workshop(s), only one person per family was instructed to take the survey. Surveys were available in English and in Spanish.

Both the pre-workshop and post-workshop survey covered the following topics: (1) parent/caregiver beliefs in their ability to support their children's learning; (2) parent/caregiver comfort with new literacies, engineering, and computational thinking skills; (3) parent/caregiver comfort with using media and technology to support their children's learning; (4) parent/caregiver attitudes and connections toward public media. These items allowed researchers to measure change from workshop start to workshop end.

In addition, the pre- and post-workshop surveys each included unique content. Pre-workshop surveys included questions related to family background, such as home language, ethnicity, parents'/caregivers' educational background, and so on. Data were used to describe the sample, and to provide additional

information to help interpret patterns in, and changes to, parents'/caregivers' perceptions and beliefs. The post-workshop parent/caregiver survey probed the workshop experience for adults and children, covering parents'/caregivers' sense of what worked well for their child, and their understanding of the general concepts that are included in the overall goals of the workshop.

Family Observations and Informal Parent/Caregiver Conversations

At five CC-ELM, researchers observed workshop sessions during the first meeting of the workshop cycle. The researchers then conducted a second visit to the same CC-ELM during the final session of the workshop cycle. During both visits, researchers observed families as they participated in workshop activities. Researchers also conducted selective opportunistic interviews with families to better understand the families' experiences. These interviews were kept brief to avoid unduly intruding on families' experiences or asking them to invest significant additional time with researchers following the workshop. When possible, the same families were interviewed and observed on the follow-up visit.

The goal of the observations and informal conversations was to collect contextual information about the family's experience with the PBS KIDS ScratchJr FCL Workshop, including which aspects worked well for the family, and which aspects were challenging. In addition, the informal conversation explored (1) to what extent parents/caregivers developed confidence that they could support their children's learning during the workshop, (2) more broad questions about science learning that takes place outside of the PBS KIDS ScratchJr FCL Workshop activities, (3) family attitudes about media and coding, and (4) how parents see the station and public media. Data gathered from the observations and informal conversations were used to illustrate how families engage with the PBS KIDS ScratchJr FCL Workshop experience.

In selecting families for observation and informal conversations, EDC/SRI aimed to include all families at each of the five sites that agreed to participate in more intensive data collection. Some families were excluded from observations or informal conversations due to logistics (e.g., late arrival, early departure, or child behavior challenges) or language barriers. Where there was insufficient time to include all families at a given site in observations or interviews, EDC/SRI sampled for diversity of families, taking into account apparent degree of comfort and confidence with technology, and family composition.

Parent informal conversations focused on the impact of the workshop on the child who was in or closest to the target age group, 5- to 8-year-old children. Some parent interviewees had children who were outside the target age range; they were instructed to focus on a child they brought to the workshop who was closest in age to the target range. Most interviewees reported on children within the target age range.

Facilitator Surveys

Researchers worked with all 16 CC-ELM to distribute a facilitator survey. One contact at each station was instructed to e-mail a link to the digital survey to all station and partner PBS KIDS ScratchJr FCL Workshop facilitators after the fourth or final session. Facilitators were instructed to complete the survey on their own computer as soon after the final PBS KIDS ScratchJr FCL Workshop session as possible. The survey measures basic characteristics of facilitators (e.g., place of employment) and workshops (e.g., location, access to Wi-Fi, number of facilitators and staff present); facilitators' attitudes toward the PBS KIDS ScratchJr FCL Workshop plans and technology; and successes and challenges encountered.

Facilitator and Station/Community Organization Leader Interviews

At five CC-ELM, researchers interviewed workshop facilitators (station and community partner staff responsible for leading the workshops) and station and community partner organization leaders. Interviews were conducted before, during, or shortly after the fourth FCL Workshop session, depending on interviewee availability. Interviews covered topics including how participants were identified and recruited, prior programming efforts undertaken to reach the target audience, challenges and successes during implementation, and planned next steps.

Learning Artifacts

Sixteen artifacts were collected from families attending the PBS KIDS ScratchJr FCL Workshops in the five site-visit CC-ELM. Researchers asked families participating in the informal parent/caregiver conversations for permission to photograph their ScratchJr projects. Photographs focused on the project script so that the number of coding blocks was visible for future analysis. Photographs included only the iPad screen—they did not include participant faces or any identifying information.

Appendix D. Data Collection Protocols

The following instruments were used in this study:

- Parent Pre-Workshop Survey
- Parent Post-Workshop Survey
- Observation Protocol
- Informal Parent Conversation Protocol: First Session
- Informal Parent Conversation Protocol: Fourth Session
- Facilitator Survey
- Facilitator Interview Protocol
- Administrator Interview Protocol

Parent Pre-Workshop Survey

Note for Facilitators: questions after #7 will appear in a random order that may not match what is listed below. Every caregiver will receive the same questions, just in a different order.

PBS KIDS Family Creative Learning Workshop is a series of fun activities for families with PBS KIDS characters, games, apps, and videos.

Researchers want to learn what families do and do not like about these workshops. We will ask caregivers to take a survey at the first workshop session and the last workshop session. We may watch some caregivers with their children during the session, and we may ask to interview some caregivers about their experience.

Confidentiality: Your name will not be used by anyone other than the research team. Any report about the session will not use your name.

Research is Voluntary: Your participation in this study is completely voluntary. You can choose to be in the study or not, and you can always change your mind and decide to stop being in the study.

Questions: If you have questions about this project please contact: Jaime Gutierrez at (212) 807-4235 or at jgutierrez@edc.org.

Consent:

- YES, I AGREE TO BE PART OF THIS STUDY
- NO, I DO NOT WANT TO BE PART OF THIS STUDY

Condition: NO, I DO NOT WANT TO BE PAR... Is Selected, Skip To: End of Survey.

About this Survey

Thank you for helping us to learn what families do and do not like about these workshops. We will ask caregivers to take a survey at the first workshop session and the last workshop session. Your participation in this study is completely voluntary. You can choose to be in the study or not, and you can always change your mind and decide to stop being in the study.

1. What local television station is sponsoring this event?

- Austin - KLRU
- Boston - WGBH
- Cleveland – WVIZ/PBS ideastream
- Detroit - WTVS
- Indianapolis - WFYI
- Iowa - IPTV
- Kentucky - KET
- Mississippi - MPB
- St. Louis - KETC
- Oklahoma - OETA
- Pittsburgh - WQED
- Southern California - PBS SoCaL
- Tacoma - KBTC
- Tallahassee - WFSU
- Tennessee - WCTE
- Vegas PBS - KLVX

This information is for researchers to track responses and will never be shared outside the research team.

2. What is the first letter of your first name? ____

3. What is the first letter of your last name? ____

4. In what month were you born?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

5. In what year were you born? _____

Please answer the next questions about ONE child you brought today who is between ages 5 and 8. If you brought more than one child between ages 5 and 8, pick just one child to think about.

6. What is the child's first name? Remember, pick ONE child between the ages of 5 and 8. _____

7. Are you the child's legal parent or guardian?

- Yes
- No

8. Q22 In what month was [autofill with first name entered in Q6] born?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

9. Q34 In what year was [autofill with first name entered in Q6] born?

Technology for Learning at Home

10. Which of the following technology skills, if any, do you help [autofill with first name entered in Q6] practice outside of school? (Mark all that apply)

- Use a computer, tablet, or smartphone to create something
- Use a computer, tablet, or smartphone to understand something or solve a problem
- Neither of the above.

11. Look at the statements below. Do you agree or disagree? (Mark one for each row.)

	Agree	Disagree	Don't Know/ Not Applicable
I can help [autofill with first name entered in Q6] learn science.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can help [autofill with first name entered in Q6] learn technology skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I can help [autofill with first name entered in Q6] learn how to read and write.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Important learning happens outside of school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want to spend more time each week helping [autofill with first name entered in Q6] learn at home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want to spend more time supporting [autofill with first name entered in Q6] school activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Look at the statements below. Do you agree or disagree? (Mark one for each row)

	Agree	Disagree	Don't Know/ Not Applicable
Technology, like computers and tablets, should be part of young children's learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computers and tablets encourage young children's creativity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
[autofill with first name entered in Q6] is interested in science jobs, such as scientist, doctor, computer programmer, astronaut, or engineer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using technology helps young children learn skills they will need in the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Is [autofill with first name entered in Q6] excited about: (Mark one for each row)

	Excited	Not Excited	Don't know
Math	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading, writing, or literacy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computer coding or programming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology (e.g., using computers or tablets)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Careers in science (e.g., scientist, computer programmer, doctor, astronaut)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Family Use of Media

14. Please indicate the channels that [autofill with first name entered in Q6] child watches

- Nickelodeon (Nick Jr.)
- Disney (Disney Jr)
- PBS KIDS
- Sprout
- Cartoon Network
- HBO
- Don't know/skip
- Other (Please Specify): _____

15. Please rank the following channels from those you feel are the MOST educational to LEAST educational. (Drag the names to rank them)

- _____ Cartoon Network
- _____ Disney (Disney Jr)
- _____ HBO
- _____ Nickelodeon (Nick Jr.)
- _____ PBS KIDS
- _____ Other (please specify:) _____

Technology at Home

16. Thinking just about last week, about how often did [autofill with first name entered in Q6] do each of the following activities at home? (Mark one for each row.)

	Never	1 to 2 times	3 to 4 times	Every day	Don't know/skip
Watch TV, DVDs, online videos, or other types of videos	<input type="radio"/>				
Play games on a video game player, computer, or mobile device (like a cell phone)	<input type="radio"/>				
Use apps or software programs other than games/videos (like a photo app or drawing program)	<input type="radio"/>				

17. Thinking just about last week, about how much time did [autofill with first name entered in Q6] spend with technology (watching videos, using tablets or a smartphone, playing video games, etc.)? (Mark only one.)

- Less than half an hour a day
- Half an hour to 1 hour a day
- 1-2 hours a day
- 2-3 hours a day
- More than 3 hours a day
- Don't know/skip

18. Thinking just about last week, about how much time did you spend using technology (watching videos, using tablets or a smartphone, playing video games, etc.) WITH [autofill with first name entered in Q6]? (Mark only one.)

- Less than half an hour a day
- Half an hour to 1 hour a day
- 1-2 hours a day
- 2-3 hours a day
- More than 3 hours a day
- Don't know/skip

19. Do you monitor or limit [autofill with first name entered in Q6]'s screen time (watching TV, using the computer, playing video games, etc.)? (Mark only one)

- Yes
- No
- Don't know/skip

Background

20. Does [autofill with first name entered in Q6] receive special education services, have an IEP (individualized education program), or have a 504 Plan? (Mark only one.)

- Yes
- No
- Don't know/skip

21. What languages does [autofill with first name entered in Q6] speak, understand, or hear at home?

(Mark all that apply.)

- English
- Spanish
- Chinese (Mandarin, Cantonese, or other)
- French
- Vietnamese
- Other (Please specify): _____

22. Are any of your children eligible for free or reduced price lunch?

- Yes
- No
- Don't know/skip

23. Please indicate [autofill with first name entered in Q6]'s race and ethnicity. (Mark all that apply).

- White (Non-Hispanic)
- Hispanic or Latino
- Black or African-American
- Asian
- Native Hawaiian or Other Pacific Islander
- American Indian or Alaskan Native
- Other (Please Specify): _____

24. Please indicate [autofill with first name entered in Q6]'s sex. (Mark only one).

- Male
- Female

25. What is your relationship to [autofill with first name entered in Q6]? (Mark only one).

- Mother
- Father
- Grandmother
- Grandfather
- Guardian
- Other (Please Specify): _____

26. Please indicate the highest level of education [autofill with first name entered in Q6]'s mother completed. (Mark only one).

- 8th grade or less
- Some high school
- High school diploma or GED
- Some college (no diploma)
- Associate's degree (AA, AS) or Technical Degree
- Bachelor's Degree (BA, BS)
- Graduate or Professional Degree
- Don't know

Parent Post-Workshop Survey

Note for Facilitators: questions after #7 will appear in a random order that may not match what is listed below. Every caregiver will receive the same questions, just in a different order.

PBS KIDS Family Creative Learning Workshop is a series of fun activities for families with PBS KIDS characters, games, apps, and videos.

Researchers want to learn what families do and do not like about these workshops. We will ask caregivers to take a survey at the first workshop session and the last workshop session. We may watch some caregivers with their children during the session, and we may ask to interview some caregivers about their experience.

Confidentiality: Your name will not be used by anyone other than the research team. Any report about the session will not use your name.

Research is Voluntary: Your participation in this study is completely voluntary. You can choose to be in the study or not, and you can always change your mind and decide to stop being in the study.

Questions: If you have questions about this project please contact: Jaime Gutierrez at (212) 807-4235 or at jgutierrez@edc.org.

Consent:

- YES, I AGREE TO BE PART OF THIS STUDY
- NO, I DO NOT WANT TO BE PART OF THIS STUDY

Condition: NO, I DO NOT WANT TO BE PAR... Is Selected, Skip To: End of Survey.

1. What local television station is sponsoring this event?

- Austin - KLRU
- Boston - WGBH
- Cleveland – WVIZ/PBS ideastream
- Detroit - WTVS
- Indianapolis - WFYI
- Iowa - IPTV
- Kentucky - KET
- Mississippi - MPB
- St. Louis - KETC
- Oklahoma - OETA
- Pittsburgh - WQED
- Southern California - PBS SoCal
- Tacoma - KBTC
- Tallahassee - WFSU
- Tennessee - WCTE
- Vegas PBS - KLVX

2. This workshop is four sessions long. Did you attend the first session of this workshop?

- Yes, I attended the first session
- I did not attend the first session, but my family did
- My family did not attend the first session

This information is for researchers to track responses and will never be shared outside the research team.

3. Think about the adult who brought your child/children to the first session of this workshop. What is the first letter of his or her first name? ____

4. Think about the adult who brought your child/children to the first session of this workshop. What is the first letter of his or her last name? ____

5. Think about the adult who brought your child/children to the first session of this workshop. In what month was he or she born?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

6. Think about the adult who brought your child/children to the first session of this workshop. In what year was he or she born? _____

At the first session of this workshop, you picked one child between ages 5 and 8 to answer the survey about. Please answer the next questions thinking about that same child. If you can't remember, pick one child you brought today who is between ages 5 and 8.

7. Are you the child's legal parent or guardian?

- Yes
- No

8. What is the child’s first name? Remember, pick ONE child who is between ages 5 and 8. ____
9. Which of the four workshop sessions has [autofill with first name entered in Q8] attended? (Check all that apply.)
- The first session
 - The second session
 - The third session
 - The fourth (last) session

Technology at Home

10. Have you downloaded and used PBS KIDS ScratchJr at home?
- Yes
 - No
 - Not Yet - But I plan to
 - No, because I’m not able to
 - Don't know/skip
11. How likely is it that [autofill with first name entered in Q8] will continue using PBS KIDS ScratchJr in the future?
- Very Likely
 - Likely
 - Not Likely
 - Don't know/skip

12. Think about the last FCL Workshop session that you attended. Do you agree or disagree?

	Agree	Disagree	Don't know/skip
[autofill with first name entered in Q8] enjoyed it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoyed it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There was enough time in workshops to learn and practice new concepts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The workshop was a friendly and welcoming place.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would recommend this session to other families.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
[autofill with first name entered in Q8] talks about the PBS KIDS apps, videos or games used in workshop activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Look at the statements below. Do you agree or disagree? The workshops...

	Agree	Disagree	Don't know/skip
Provided me with information that is useful to me when working with [autofill with first name entered in Q8].	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Focused on too many topics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Led me to think about science in a new way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Led me to think about technology in a new way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Led me to think about engineering in a new way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Led me to try new activities at home with [autofill with first name entered in Q8].	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Q29 Do you consider your local PBS station to be a resource to support [autofill with first name entered in Q8]'s learning?

- Yes (please describe) _____
- No (please describe) _____

Technology for Learning at Home

15. Which of the following technology skills, if any, do you help [autofill with first name entered in Q8] practice outside of school? (Mark all that apply)

- Use a computer, tablet, or smartphone to create something
- Use a computer, tablet, or smartphone to understand something or solve a problem
- Neither of the above.

16. Look at the statements below. Do you agree or disagree? (Mark one for each row.)

	Agree	Disagree	Don't Know/ Not Applicable
I can help [autofill with first name entered in Q8] learn science.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can help [autofill with first name entered in Q8] learn technology skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can help [autofill with first name entered in Q8] learn how to read and write.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Important learning happens outside of school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want to spend more time each week helping [autofill with first name entered in Q8] learn at home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want to spend more time supporting [autofill with first name entered in Q8]'s school activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Look at the statements below. Do you agree or disagree? (Mark one for each row)

	Agree	Disagree	Don't Know/ Not Applicable
Technology, like computers and tablets, should be part of young children's learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computers and tablets encourage young children's creativity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
[autofill with first name entered in Q8] is interested in science jobs, such as scientist, doctor, computer programmer, astronaut, or engineer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using technology helps young children learn skills they will need in the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. Is [autofill with first name entered in Q8] excited about: (Mark one for each row).

	Excited	Not Excited	Don't Know
Math	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading, writing, or literacy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computer coding or programming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology (e.g., using computers or tablets)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Careers in science (e.g., scientist, computer programmer, doctor, astronaut)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. What is your relationship to [autofill with first name entered in Q8]? (Mark only one).

- Mother
- Father
- Grandmother
- Grandfather
- Guardian
- Other (Please Specify): _____

20. Thinking just about last week, about how often did [autofill with first name entered in Q8] do each of the following activities at home? (Mark one for each row.)

	Never	1 to 2 times	3 to 4 times	Every day	Don't know/skip
Watch TV, DVDs, online videos, or other types of videos	<input type="radio"/>				
Play games on a video game player, computer, or mobile device (like a cell phone)	<input type="radio"/>				
Use apps or software programs other than games/videos (like a photo app or drawing program)	<input type="radio"/>				

21. Thinking just about last week, about how much time did [autofill with first name entered in Q8] spend with technology (watching videos, using tablets or a smartphone, playing video games, etc.)? (Mark only one.)

- Less than half an hour a day
- Half an hour to 1 hour a day
- 1-2 hours a day
- 2-3 hours a day
- More than 3 hours a day
- Don't know/skip

22. Thinking just about last week, about how much time did you spend using technology (watching videos, using tablets or a smartphone, playing video games, etc.) WITH [autofill with first name entered in Q8]? (Mark only one.)

- Less than half an hour a day
- Half an hour to 1 hour a day
- 1-2 hours a day
- 2-3 hours a day
- More than 3 hours a day
- Don't know/skip

Background

23. Does [autofill with first name entered in Q8] receive special education services, have an IEP (individualized education program), or have a 504 Plan? (Mark only one.)

- Yes
- No
- Don't know/skip

24. What languages does [autofill with first name entered in Q8] speak, understand, or hear at home?

(Mark all that apply.)

- English
- Spanish
- Chinese (Mandarin, Cantonese, or other)
- French
- Vietnamese
- Other (Please specify): _____

25. Are any of your children eligible for free or reduced price lunch?

- Yes
- No
- Don't Know/skip

26. Please indicate [autofill with first name entered in Q8]'s race and ethnicity. (Mark all that apply).

- White (Non-Hispanic)
- Hispanic or Latino
- Black or African-American
- Asian
- Native Hawaiian or Other Pacific Islander
- American Indian or Alaskan Native
- Other (Please Specify): _____

27. Please indicate [autofill with first name entered in Q8]'s sex. (Mark only one).

- Male
- Female

28. What is your relationship to [autofill with first name entered in Q8]? (Mark only one).

- Mother
- Father
- Grandmother
- Grandfather
- Guardian
- Other (Please Specify): _____

29. Please indicate the highest level of education [autofill with first name entered in Q8]'s mother completed. (Mark only one).

- 8th grade or less
- Some high school
- High school diploma or GED
- Some college (no diploma)
- Associate's degree (AA, AS) or Technical Degree
- Bachelor's Degree (BA, BS)
- Graduate or Professional Degree
- Don't know

Questions for Parents who Did Not Respond to Session 1 Survey:

This information is for researchers to track responses and will never be shared outside the research team.

30. What is the first letter of your first name?

31. What is the first letter of your last name?

32. In what month were you born?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

33. In what year were you born?

Observation Protocol

<p>PROTOCOL DESCRIPTION</p>
<p>This observation takes place with a family that is participating in activities at a Family Creative Learning (FCL) Workshop. The goal for the observation is to collect contextual information about the family’s experience with the PBS KIDS FCL Workshop, including which aspects worked well for the family and which aspects were challenging.</p>
<p style="text-align: center;">USING THE OBSERVATION PROTOCOL</p>
<p>You may find it helpful to review the facilitator guidebook before the session, to make the most of your observations.</p> <p>The protocol should be used when families are assigned to work in SCRATCHJR during the MAKE phase. Depending on workshop structure, you may instead need to use this during EXPLORE. If so, try to capture periods when parents and/or children are working in SCRATCHJR.</p> <p>Select some families that are enthusiastic about participating, some that are experiencing challenges, and some that are disengaged in the activities.</p> <p>Observations should last at least five minutes, and up to ten minutes for an especially interesting observation. Aim to complete at least two family observations during MAKE.</p> <p>Try to also interview families you observe. Use the family interview protocol.</p> <p>Complete observations on paper or computer, as session logistics allow. Enter them into Qualtrics after the session.</p> <p>If possible, the observation protocol is to be used twice with the same family: once during the first session and again during the final session. This will allow for the possibility of capturing change in how programs are structured to accommodate children’s growing familiarity with PBS KIDS ScratchJr over time, and how adults make these accommodations.</p>

Complete Once Per Workshop Phase	
(Complete only for the first observation during the MAKE phase. If you also observe during EXPLORE, complete for the first observation during EXPLORE as well.)	
Observation Context	
Observer:	
Station Name:	
Date:	
Time:	
Facilitator:	
Describe the room and room layout:	
Counts of People in the Room	
FCL Workshop staff:	
Parents/caregivers:	
Children:	
Female children:	

Describe the Focal Family as You Find Them				
Enter This Information if Known (e.g., from interview). If unknown, do not ask.				
Parent First Name and Last Initial				
Child First Name				
Family Context				
Who is present? (e.g. target child, sibling, parent, caregiver)				
Where are they? (e.g., room or area)				
How are they configured? (e.g. child next to parent)				
What stage of the session are they in? (circle one)	Eat	Explore	Make	Share
Would you describe the family as more: (circle one)	Enthusiastic	Challenged	Disengaged	

Describe the family's interactions

with each other, with facilitators, and with technology and media content.

See examples of behaviors of interest on the next page.

Behaviors of Interest

When observing the family's interactions, keep these questions in mind. You do not need to answer questions individually; they are intended to guide your attention to relevant behaviors. Take your notes on the preceding page.

1. Describe the behaviors and interactions **between the child and family member(s)**.
 - What caregiver behaviors do you observe? (e.g., asking the child questions, commenting on what she/he or the child is seeing/doing, interrupting/halting child's play, learning from the child, etc.)
 - What verbal and nonverbal interactions take place between family members?

2. Describe the child's engagement with the **media/technology resources**.
 - Who controls most of the use of the device? (e.g. target child, sibling, peer, parent, caregiver, etc.)
 - Do they experience any tech problems? If so, describe.
 - What are the child's physical behaviors when interacting or watching the screen? (e.g., sitting still, moving around, attending to or looking away from the screen)
 - Is there evidence that the child is connecting with the digital media resource or the characters? (e.g., talking to characters he or she has created, or laughing at animations he or she has programmed)
 - Are there times when the child or family members seem disengaged? Describe when and for what reason, if known.
 - Describe the child's level of interest in engaging with family members versus engaging with the digital media.

3. What **coding and computer science** is going on?
 - What part of the process is happening?
 - What terms are they using?
 - Are they using language that the facilitators use?

4. Describe the behaviors and interactions **between the facilitator and families**.
 - What facilitator behaviors do you observe? (e.g., asking questions, commenting on what children/caregivers are seeing/doing, providing assistance, holding the device, pointing at the screen, interrupting play, etc.)
 - What verbal and nonverbal interactions take place between the facilitator and family members?

Informal Parent Conversation Protocol: First Session

MEASURE DESCRIPTION
<p>This informal conversation takes place with a parent/caregiver whose child is participating in activities at a Family Creative Learning (FCL) Workshop. This is designed to be a short and informal conversation that will explore to what extent parents/caregivers developed confidence that they could support their children’s learning during the workshop, and more broad questions about science learning, family attitudes about media and coding, and parent/caregiver perspectives on the station and public media.</p>
USING THIS PROTOCOL
<p>Use this protocol during the first session of the Family Creative Learning Workshop series.</p> <p>The informal conversation takes place during the EAT portion of the workshop (at the beginning, as families are getting settled). Interview families only after they have completed the survey.</p> <p>Interview parent(s)/caregiver(s) of children in the workshop. Both interviewees and the interviewer should be fluent in the same language.</p> <p>Select some families that are <u>enthusiastic</u> about participating, some that are <u>experiencing challenges</u>, and some that are <u>disengaged</u> in the activities.</p> <p>Confirm that the parent/caregiver read the consent form before they took the survey. Do not record interview audio. Instead, take running record notes.</p> <p>Prioritize the family’s workshop experience. You can always stop the interview if it is posing a burden.</p> <p>If possible, conduct an observation for each family that you interview.</p>

Conversation Context	
Observer:	
Station Name:	
Date:	
Time:	
Interview Questions: FIRST SESSION	
Intro: May I ask you a few questions? We will never share this information outside the research team. You don't have to answer any question and you can stop at any time.	
1) What is your first name?	
2) What is the first letter of your last name?	
3) What is the first name of the child you brought with you? <i>(If >1 child, Which of these children is between 5 and 8?)</i>	
4) How old is [child]?	
5) How did you hear about this program and why did you want to participate?	
6) Is the ScratchJr workshop your family's first event with [local PBS station]?	
a. <i>[if no]</i> How long has your child (children) been attending activities like this?	
7) Are there activities that you encourage [child] to do at home or during family time that help him/her learn? If yes, what are they? <i>Prompt: We are concerned with outside of school time. Examples: Museum, books, videos.</i>	
8) This activity is about learning about computer programming and coding. Did you/your child know anything about programming or coding before you came to this workshop?	
9) What do you think about children learning how to code? <i>If parent doesn't know what coding is: That's okay. That's what this workshop is about.</i>	
10) Do you plan to return to the next three workshop sessions? Why or why not?	

Informal Parent Conversation Protocol: Fourth Session

MEASURE DESCRIPTION
<p>This informal conversation takes place with a parent/caregiver whose child is participating in activities at a Family Creative Learning (FCL) Workshop. This is designed to be a short and informal conversation that will explore to what extent parents/caregivers developed confidence that they could support their children’s learning during the workshop, and more broad questions about science learning, family attitudes about media and coding, and parent/caregiver perspectives on the station and public media.</p>
USING THIS PROTOCOL
<p>Use this protocol during the fourth/final session of the Family Creative Learning Workshop series.</p> <p>The informal conversation takes place during the EAT portion of the workshop (at the beginning, as families are getting settled).</p> <p>Interview parent(s)/caregiver(s) of children in the workshop. Both interviewees and the interviewer should be fluent in the same language.</p> <p>Where possible, interview the same families who were interviewed during the first session.</p> <p>Select some families that are <u>enthusiastic</u> about participating, some that are <u>experiencing challenges</u>, and some that are <u>disengaged</u> in the activities.</p> <p>Do not record interview audio. Instead, take running record notes.</p> <p>Prioritize the family’s workshop experience. You can always stop the interview if it is posing a burden.</p> <p>If possible, conduct an observation for each family that you interview.</p>

Conversation Context	
Observer:	
Station Name:	
Date:	
Time:	
Interview Questions: FOURTH/FINAL SESSION	
Intro: May I ask you a few questions? We will never share this information outside the research team. You don't have to answer any question and you can stop at any time.	
1) What is your first name?	
2) What is the first letter of your last name?	
3) What is the first name of the child you brought with you? <i>(If >1 child, Which of these children is between 5 and 8?)</i>	
4) How old is [child]?	
5) When [child] is not at the workshop (i.e. at home, or at school) does she/he talk about what she/he does at the workshop? If so, what does she/he say?	
6) Do you think [child] is learning anything new from the workshop activities? If yes, what new things is she/he learning?	
7) Did you learn anything in the workshop?	
8) Have your child's uses of technology and online games and apps changed since participating in this workshop series? In what ways?	
9) What do you think about children learning how to code?	
10) If there were more sessions like this being offered, would you attend?	
11) If you could make a workshop like this better for families like yours, what would you change?	

Facilitator Survey

About About this Survey

This survey asks about how you use the Family Creative Learning (FCL) Workshop learning materials and resources, how you use technology in this program, and some background questions about you and the children in your program. Your answers on this survey will help local public media station staff understand how the CPB-PBS Ready To Learn team can support staff at programs like yours, and help young children and families develop new knowledge, skills, and attitudes. The study is led by Education Development Center, Inc. and SRI Education, non-profit research organizations that have been active in education and community development for decades. This study is funded by the Corporation for Public Broadcasting and the U.S. Department of Education.

Participating in this survey is voluntary. Nothing will happen if you decide to leave the study before it is over. Once you agree to participate, you can always change your mind and decide not to participate.

Your answers are confidential. All data will be kept in secured files. Your name will not be used by anyone other than the research team. Any report of the data collected will be in summary form, and will not identify individuals.

If you have questions about this project please contact Jaime Gutierrez at (212) 807-4235 or at jgutierrez@edc.org. If you would like to talk with someone who is not involved in the research or have questions regarding your rights as a research participant, you can contact EDC's Human Protections Administrator at 1-800-225-4276 ext. 2971 or humanprotections@edc.org.

1. Where do you work?

- PBS member station
- Community organization
- School district
- Head Start center
- Housing authority
- Library
- Museum or other educational center
- Other (please describe): _____

2. Describe the location where the FCL Workshop session happened.

- PBS member station
- Head Start center
- School
- Housing complex
- Community organization
- Library
- Other (please describe): _____

3. Is your Wi-Fi access reliable at this site?

- Yes
- No
- I don't know
- There is no Wi-Fi

4. How many facilitators and staff, besides you, were working with the children in the most recent FCL Workshop session?

Planning and Preparation

5. Do you agree or disagree with the following statements about using the FCL Workshop workshop plans?

	Agree	Neutral	Disagree	Don't know/Not applicable
The FCL Workshop plans are clear and easy to use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel well-prepared to use FCL Workshop activity plans effectively with children and families.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. How much do you agree with these statements about the Family Creative Learning Workshops session technology and media?

	Agree	Neutral	Disagree	Don't know/Not applicable
The FCL Workshop technology and media allow children to use educational resources that would not be available to them otherwise.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The FCL Workshop technology and media help children learn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<p>about reading and literacy.</p> <p>The FCL Workshop technology and media help children learn how to use technology.</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>The FCL Workshop technology and media help children learn about coding and computer technology.</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. To what degree did you encounter any of the following challenges in the most recent FCL Workshop session?

	Not a challenge	Small challenge	Big challenge	I don't know/Not applicable
Resistance from administrators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet connection too slow	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not enough tablets available	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not enough technical support (for set-up, repair, troubleshooting, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The site had firewalls or filters that blocked access to certain websites or online content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing difficult behaviors when children use technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Challenges with way the FCL Workshop space is set up	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Insufficient planning time to prepare for using technology with children and families	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resistance from parents/caregivers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not enough families attended	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More families attended than space/resources allow	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with children who have disabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicating with parents/caregivers for whom English is not a first language	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entertaining non-participating younger siblings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. How much to do agree or disagree with the following?

	Agree (1)	Neutral (2)	Disagree (3)	Don't know/Not applicable (4)
Tablets worked well at the most recent FCL Workshop session	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Was there any need for tech support during the Family Creative Learning Workshops session?

- No
- Yes, and tech support was available
- Yes, and tech support was not sufficient
- Don't know

10. What successes have you experienced using the FCL Workshop resources so far? (Mark all that apply.)

- Kids enjoyed the session.
- Parents/caregivers enjoyed the session.
- Families were proud of the product they created
- Parents/caregivers indicated that they would return to the next session.
- Parents/caregivers and kids indicated that they would continue using ScratchJr. at home.
- I felt able to teach parents and children how to use ScratchJr.
- I felt able to help both parents and children learn and communicate about ScratchJr.
- Other (please describe): _____

Q11 How, if at all, does using FCL Workshop resources benefit the mission of your organization?

Q12 In your opinion, what are the strongest features of the PBS KIDS ScratchJr Workshop?

Q13 What suggestions do you have that would improve future workshops at your station?

Facilitator Interview Protocol

When to Use This Protocol
This protocol is for use in conversations with frontline station staff working directly with families participating in Family Creative Learning Workshops. Community partners may include libraries, afterschool programs, summer camps, and other groups that work directly with families. This protocol should be used with primary contacts/representatives from station staff and community partners, rather than with volunteers or assistants, for example.
How to Use This Protocol
Sections/questions should be selected based on appropriateness given the role of the person being interviewed and the agency he or she represents. Interviewers should prepare in advance as much as possible, but should also be familiar with the protocol as a whole so they can adapt quickly in the field.
<i>Print out or PDF the Interview Information sheet below and share with the interviewee prior to starting the interview.</i>

Interview Information

Your responses to this interview will help the CPB-PBS Ready To Learn team learn how best to support local stations and their community partners, and how to help young children and families develop new knowledge, skills, and attitudes. The study is led by Education Development Center, Inc. and SRI Education, non-profit research organizations that have been active in education and community development for decades. This study is funded by the Corporation for Public Broadcasting and the U.S. Department of Education.

Participating in this interview is voluntary. Nothing will happen if you decide to end the interview before it is over. Once you agree to participate, you can always change your mind and decide not to participate.

Your answers are confidential. All data will be kept in secured files. Your name will not be used by anyone other than the research team. Any report of the data collected will be in summary form, and will not identify individuals.

If you have questions about this project please contact Jaime Gutierrez at (212) 807-4235 or at jgutierrez@edc.org. If you would like to talk with someone who is not involved in the research or have questions regarding your rights as a research participant, you can contact EDC's Human Protections Administrator at 1-800-225-4276 ext. 2971 or humanprotections@edc.org.

Background
1. How long have you been with <i>[partner organization/station]</i> ?
2. What are your major responsibilities?
3. What is your role with respect to <i>Family Creative Learning Workshops</i> ?

Community and Target Audiences
4. We'd like to know more about the families and neighborhoods you are reaching through the <i>Family Creative Learning Workshop</i> . Who are you intending to serve? <i>Probe on race/ethnicity, ELL status, urban/rural location.</i>
5. How do you learn about the specific needs and concerns of your target audiences?
6. What are the greatest needs of parents/guardians with regard to supporting their young children's learning at home? <i>[This question may be more appropriate for partners than for station staff, frontline staff rather than administrators. If interviewing a person who struggled to define target audiences above, consider skipping this question.]</i>
a. What are the parents'/guardians' biggest concerns about their young children's learning?
b. What challenges do parents/guardians face in supporting young children's learning? <i>Probe for feedback on different learning content areas, specifically science and literacy.</i>

<p>7. What are some of your key strategies for communicating and building relationships with Family Creative Learning Workshop families? Please share any broad strategies that you have.</p> <p><i>Probe for using workshops as an entry point for sustained engagement, using social marketing to deliver messages about early learning, reaching parents and caregivers in familiar settings.</i></p>
<p>8. In general, what are the biggest challenges you face in working with families in your community?</p>
<p>9. What resources or supports would be most helpful in overcoming these educational challenges and meeting these needs in the <i>Family Creative Learning Workshop</i>?</p>

<p>Goals and Technology</p>
<p>10. What are your [organization/ station]’s goals for the <i>Family Creative Learning Workshops</i>?</p>
<p>11. How do <i>Family Creative Learning Workshop</i> media and technology tools—like PBS KIDS ScratchJr - fit with other community work and educational programming you do at your [organization/station]?</p> <p><i>Probe on whether Family Creative Learning Workshops are expanding the communities they reach or deepening work they are already doing with certain communities or STEM content.</i></p>
<p>12. Do you typically use media or technology in your family outreach programs?</p>

Supporting Those Who Work with Families
We'd like to know about the training and professional development to support facilitators working with children and families as part of the Family Creative Learning Workshop.
13. What training or professional development did the station offer for facilitators as part of the <i>Family Creative Learning Workshop</i>?
a. What were the goals for the training?
b. Who participated in the training? <i>Probe for station staff, partner staff, all facilitators or just leads.</i>
c. Who provided the training?
d. What activities were included in the training?
e. What are facilitators' greatest concerns? <i>Probe for what facilitators have said during reflection time.</i>
14. What have been the greatest challenges in supporting facilitators?

PBS-Provided Training
<p>Now we'd like to talk about any training and support PBS may have provided for facilitating FCL Workshops with caregivers and children.</p> <p>Did you receive any training or support directly from PBS?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No [<i>Skip this section</i>]
<p>15. Can you describe any preparation or training you received from PBS in order to get ready for this <i>Family Creative Learning Workshop</i>? <i>Probe for type of preparation, intensity of preparation, focus on technology, focus on content (STEM), support materials. Probe for whether they received any additional training not provided by PBS.</i></p>
<p>16. How, if at all, did this training prepare you to work with families? What would have made the training more complete or effective?</p>
<p>17. How satisfied are you with the <i>Family Creative Learning Workshop</i> materials? What parts do you like; what changes would you like to see? <i>Probe on the materials specific to that FCL Workshop experience, for example, for ScratchJr, the Facilitator Guide, the family journal, the hand- on materials used in the workshop, etc.]</i></p>

Outcomes and Lessons Learned
<p>18. Is there anything that you would do differently if you were doing this year's <i>Family Creative Learning Workshops</i> again? <i>Probe for structure, participants, use of facilitator guide.</i></p>
<p>19. What were your expectations for the <i>Family Creative Learning Workshop</i> going in? How, if at all, have your expectations changed?</p>
<p>20. Are you seeing any outcomes from this work so far? What are they? <i>Probe for adults, children, different types of outcomes such as social interactions, academic outcomes, confidence using technology.</i></p>
<p>21. How do you use the information that you collect about the Family Creative Learning Workshop?</p>
<p>22. Anything else you'd like to tell us about the <i>Family Creative Learning Workshop</i>? About your partners? About your participating families? <i>Probe for: What have been the greatest challenges in helping families learn Family Creative Learning Workshop content and thought processes?</i></p>

Administrator Interview Protocol

<p>When to Use This Protocol</p> <p>This protocol is for use in conversations with station leaders (general managers and education directors) and with their partner organization counterparts. Community partners may include community-based organizations state agencies and school districts.</p>
<p>How to Use This Protocol</p> <p>Sections/questions should be selected based on appropriateness given the role of the person being interviewed and the agency he or she represents. Interviewers should prepare in advance as much as possible, but should also be familiar with the protocol as a whole so they can adapt quickly in the field.</p>
<p>Print out the Interview Information sheet below and share with the interviewee prior to starting the interview.</p>

Interview Information

Your responses to this interview will help the CPB-PBS Ready To Learn team learn how best to support local stations and their community partners, and how to help young children and families develop new knowledge, skills, and attitudes. The study is led by Education Development Center, Inc. and SRI Education, non-profit research organizations that have been active in education and community development for decades. This study is funded by the Corporation for Public Broadcasting and the U.S. Department of Education.

Participating in this interview is voluntary. Nothing will happen if you decide to end the interview before it is over. Once you agree to participate, you can always change your mind and decide not to participate.

Your answers are confidential. All data will be kept in secured files. Your name will not be used by anyone other than the research team. Any report of the data collected will be in summary form, and will not identify individuals.

If you have questions about this project please contact Jaime Gutierrez at (212) 807-4235 or at jgutierrez@edc.org. If you would like to talk with someone who is not involved in the research or have questions regarding your rights as a research participant, you can contact EDC's Human Protections Administrator at 1-800-225-4276 ext. 2971 or humanprotections@edc.org.

Background
<p>1. How long have you been with [partner organization/station]?</p>
<p>2. What are your major responsibilities?</p>
<p>3. What is your role with respect to <i>Family Creative Learning Workshops</i>?</p>

Partnership and Collaboration
<p>4. How did the partnership between [STATION/ORGANIZATION] begin? How have roles or responsibilities changed over time? <i>Probe about what the different partners bring to the table and about the value that each add to the partnership.</i></p>
<p>5. How, if at all, does this partnership extend your reach within your target communities?</p>
<p>6. How have you addressed challenges, if any, you've have with the partnership?</p>

Community and Target Audiences
<p>7. We'd like to know more about the families and neighborhoods you are reaching through the <i>Family Creative Learning Workshop</i>. Who are you intending to serve? <i>Probe on race/ethnicity, ELL status, urban/rural location.</i></p>
<p>8. How do you learn about the specific needs and concerns of your target audiences?</p>
<p>9. What are the greatest needs of parents/guardians with regard to supporting their young children's learning at home? <i>[This question may be more appropriate for partners than for station staff, frontline staff rather than administrators. If interviewing a person who struggled to define target audiences above, consider skipping this question.]</i></p>
<p>a. What are the parents'/guardians' biggest concerns about their young children's learning?</p>
<p>b. What challenges do parents/guardians face in supporting young children's learning? <i>Probe for feedback on different learning content areas, specifically science and literacy.</i></p>

Goals
<p>10. What are your [organization/ station]'s goals for the <i>Family Creative Learning Workshops</i>?</p>
<p>11. How do Family Creative Learning Workshop media and technology tools—like PBS KIDS ScratchJr - fit with other community work and educational programming you do at your [organization/station]? <i>Probe on whether Family Creative Learning Workshops are expanding the communities they reach or deepening work they are already doing with certain communities or STEM content.</i></p>

Technology
<p>12. What are your views of the media and technology tools used in the <i>Family Creative Learning Workshop</i>? <i>Probe for iPad, ScratchJr., additional tech.</i></p>
<p>13. Do you typically use media or technology in your other community engagement work?</p>
<p>14. Do you feel like media and technology tools, like PBS KIDS ScratchJr, have enhanced the programs where the tools are used? If so, how?</p>

Outcomes and Lessons Learned
<p>15. What were your expectations for the <i>Family Creative Learning Workshop</i> going in? How, if at all, have your expectations for the <i>Family Creative Learning Workshop</i> changed?</p>
<p>16. Are you seeing any outcomes from this work so far? If so, what are they? <i>Probe for adults, children, different types of outcomes such as social interactions, academic outcomes, confidence using technology.</i></p>
<p>17. How do you use information you collect about the <i>Family Creative Learning Workshop</i>?</p>
<p>18. Is there anything that you would do differently if you were doing the PBS KIDS ScratchJr <i>Family Creative Learning Workshops</i> again?</p>
<p>19. Do you see the <i>Family Creative Learning Workshops</i> continuing after the end of the grant? Why or why not?</p>

Appendix E. Data Analysis

Parent/Caregiver and Facilitator Surveys

Parent survey data collected during the pre- and post-workshops were first screened and cleaned for data quality. Data from one CC-ELM was not included, as they were unable to administer the surveys. Thus, data from only fifteen CC-ELM were included for comparisons between the pre-and post-workshop parent surveys (70 total responses). Because more than one fourth of the children who participated in the workshops were out of the prescribed age range (46 of 115), we included children older than 8 for the pre- and post- analyses.

Three types of analyses were conducted: descriptions of the pre- and post- workshop surveys, as well as comparisons of pre-to post-workshop surveys. For descriptive analyses of both the pre- and post-workshop surveys, we included all respondents who answered at least 50% of the items, regardless of whether their post-workshops surveys could be matched with a pre-workshops survey.

Researchers coded individual items into numerical codes as necessary, and conducted quantitative analysis using STATA to calculate item response frequencies. We explored pre-post change in parents'/caregivers' responses to attitudinal items. Quantitative analyses for these items was dependent on sample size. Because our final sample of matching pre-post responses was small, we used descriptive statistics and frequencies to describe trends without determining statistical significance.

Several items were created to investigate changes in parents' attitudes and perceptions relating to science and literacy education. We explored change in these items from the pre-workshop survey to the post-workshop survey, and then used them—some grouped into subscales and some analyzed individually—to investigate six areas of potential impact.

1. Parent attitudes toward STEM learning (13 items)
2. Parent attitudes toward technology (9 items)
3. Number of STEM skills that the parent helps the child learn (1 item)
4. Amount of time the parent used technology with the child in the past week (1 item)
5. Number of times the child used technology in the past week (1 item)
6. Amount of time the child spent using technology in the past week (1 item)

For this comparative analysis, researchers included only participants whose pre-workshop surveys could be matched with post-workshop surveys on the basis of parent initials, parent month and year of birth, child's first name, and site.

We neither conducted hypothesis testing to detect statistically significant differences nor computed effect sizes, for two reasons. First, the data was severely negatively skewed. Second, the sample size during this study was not large enough to conduct any statistical analyses, and doing so would have led to either uninterpretable results or to results that would not be generalizable.

Facilitator survey data collected after the final FCL Workshops were first screened and cleaned for data quality. For descriptive analyses, we included all respondents who answered at least 50% of the survey items. Researchers coded individual items into numerical codes as necessary, and conducted quantitative analysis using STATA to calculate item response frequencies. Because our final sample was small, we used descriptive statistics and frequencies to describe trends without determining statistical significance.

Workshop Observations; Interviews with Parents, Facilitators, and Administrators; and Facilitator Open-Ended Survey Responses

Researchers entered notes into a common, secure database for analysis. Data were coded at two levels: Level 1 consisted of broad codes (e.g., value for families, challenges for families) based on the research questions; Level 2 consisted of more specific sub-codes based on themes in the data within each Level 1 code.

Level 1 coding began with the development of broad codes based on the research questions. For example, one code, “Challenges (stations/partners)” was developed to address RQ 4, “What aspects of the PBS KIDS FCL Workshop model were challenging for stations/partners, and why?” The qualitative coding team discussed coding guidelines, then coded excerpts from the data sources (e.g., interviews). The team met to compare these codes and to refine the coding guidelines based on disagreements. The team then coded excerpts from an additional three data sources. Coders largely agreed about the application of codes for these three excerpts, and so the team began coding operationally. Operational coding at Level 1 was divided among six coders. Each coder was assigned a family of Level 1 codes to apply across data sources.

To develop Level 2 codes, each rater was asked to list themes that emerged within his or her assigned Level 1 codes. Coders met as a team to discuss and refine these lists. From there, a smaller team of three Level 2 coders refined these lists and coded all data using these sub-codes.

Artifacts

Researchers analyzed images of families’ ScratchJr projects as evidence of their interactions with the technology. Images were analyzed for the total number of moves included in the programming sequence, the number of unique moves included in the programming sequence, the number of pages in the project, the number of characters, and the presence of a background.

Where multiple photographs were collected for the same project (e.g., various project pages), researchers analyzed the photograph with the most total blocks in the coding script. The number of characters was derived from the character list in the upper left corner of the screen. (Thus, “characters” included vehicles and inanimate objects.) Blocks that were set to repeat by altering the number of actions performed were counted as one block (i.e., they were not counted once for each repeated action). We counted actions in different directions as unique from one another. For example, move up would be considered unique from move down.

Appendix F. Parent-Reported Technology Use

Table 6. Parent-Reported Technology Use

	Thinking just about last week, about how much time did your CHILD spend using technology (watching videos, using tablets or a smartphone, playing with videogames, etc.)	Thinking just about last week, about how much time did you spend using technology (watching videos, using tablets or a smartphone, playing with videogames, etc.) WITH YOUR CHILD
FREQUENCY	NUMBER OF PARENTS	
Less than half an hour a day	9	23
Half an hour to 1 hour a day	27	36
1-2 hours a day	46	34
2-3 hours a day	20	9
3-4 hours a day	0	12
More than 4 hours a day	12	0
None	1	N/A