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HOW TO BRING EARLY LEARNING AND FAMILY ENGAGEMENT INTO THE DIGITAL AGE

An action agenda for city and community leaders

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About the Authors

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He holds a PhD in Social Policy from the Heller School at Brandeis University and a bachelor's in science from Cornell University. Levine lives in Teaneck, New Jersey with his wife. He is on Twitter @mhl_jgcc.

Acknowledgments

About New America

New America is committed to renewing American politics, prosperity, and purpose in the Digital Age. We generate big ideas, bridge the gap between technology and policy, and curate broad public conversation. We combine the best of a policy research institute, technology laboratory, public forum, media platform, and a venture capital fund for ideas. We are a distinctive community of thinkers, writers, researchers, technologists, and community activists who believe deeply in the possibility of American renewal.

Find out more at **newamerica.org/our-story**.

About the Education Policy Program

New America's Education Policy program uses original research and policy analysis to help solve the nation's critical education problems, serving as a trusted source of objective analysis and innovative ideas for policymakers, educators, and the public at large. We combine a steadfast concern for low-income and historically disadvantaged people with a belief that better information about education can vastly improve both the policies that govern educational institutions and the quality of learning itself. Our work encompasses the full range of educational opportunities, from early learning to primary and secondary education, college, and the workforce.

Our work is made possible through generous grants from the Alliance for Early Success; the Foundation for Child Development; the Bill and Melinda Gates Foundation; the Evelyn and Walter Haas, Jr. Fund; the Heising Simons Foundation; the William and Flora Hewlett Foundation; the Joyce Foundation; the W.K. Kellogg Foundation; the Kresge Foundation; Lumina Foundation; the McKnight Foundation; the Charles Stewart Mott Foundation; the David and Lucile Packard Foundation; the Smith Richardson Foundation; the W. Clement and the Jessie V. Stone Foundation.

Find out more at **newamerica.org/education-policy**.

About the Joan Ganz Cooney Center at Sesame Workshop

The Joan Ganz Cooney Center is an independent nonprofit research and innovation lab that focuses on the challenges of educating children in a rapidly changing digital media landscape. The Center collaborates with educators, media producers, policymakers, and investors to promote learning models that can be accelerated with emerging technologies. The Cooney Center's research and programs focus on literacy development, innovations in learning, and intergenerational engagement.

Find out more at **joanganzcooneycenter.org**.

INTRODUCTION

Imagine these everyday scenes: A father and his two-year-old are in their library's bookmobile, checking out electronic and print picture books they just enjoyed at story time. Kindergartners select photos and drawings for their school's annual multimedia slideshow. A grandmother and teacher share a laptop, clicking on videos that demonstrate Spanish-language word games for school and home. Each day, parents, caregivers, and children are building language and literacy skills for the 21st century, perhaps without even realizing it.

Every community in the United States has the potential to transform itself into this kind of ecosystem that supports families and promotes digital inclusion. Resources for Digital-Age learning already exist in libraries, schools, multimedia spaces, and through parents' personal smartphones, but localities are not often tapping into them to help families in need. Other local leaders do seek out digital approaches but risk chasing after what is shiny and new if they lack the resources to critically evaluate new tools and technologies.

Promoting early learning through the support and empowerment of families—especially those who are under-resourced—has become an imperative for education leaders nationwide. In 2014, New America published *Envisioning a Digital Age Architecture for Early Education* to help leaders visualize success in this media-infused environment. Since then, New America and the Joan Ganz Cooney Center at Sesame Workshop have joined forces to document initiatives using digital tools to connect with vulnerable families and improve educational outcomes. Interactive tools such as on-demand video and text messaging are being used to inspire and reassure parents, to share learning materials between formal and informal settings, and to bring parents closer to their children's learning. Some communities are also taking steps to prepare educators as media mentors to help families and children be choosy about media and learn how to use digital tools for learning.

But so far, these efforts are sporadic and fragile. Very few are fully sustainable or ready to scale up. Community leaders need a plan. Our hope is that this agenda will generate that planning. Think of it as a companion to existing guidance, such as the Building Blocks for Success framework from the Center for the Study of Social Policy and the National League of Cities, which is already helping communities to build early learning communities. Here we nudge leaders to modernize and think digital as they do so. The following pages describe four actions to help community leaders prioritize: take stock, develop professional learning programs, invest in physical infrastructure, and create a cycle of continuous improvement.

THE STATE OF FAMILY ENGAGEMENT, EARLY LEARNING, AND DIGITAL EQUITY TODAY

Children and parents frequently learn with, and about, technology together.

Among families in which the parent and child both use the Internet:
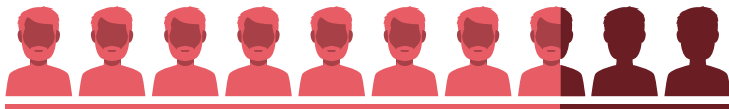
77% of parents say they have helped their children with using digital technology.

53% say their children have helped them.

Joan Ganz Cooney Center, 2014.

Social media is one of many sources for parenting advice and information...

59% found parenting information while looking at social media content.

42% received social/emotional support on a parenting issue.

31% asked parenting questions.

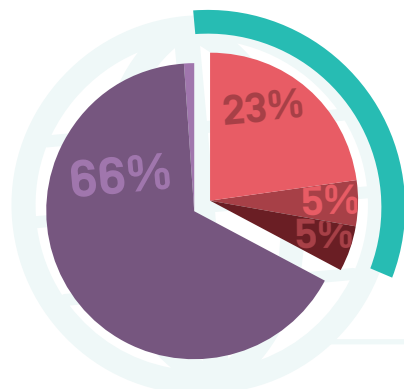Pew Research Center, 2015.

Many families want more guidance on raising their kids in the Digital Age...

More than half

of parents in a national survey said that they needed more guidance locating quality educational media to support their children's learning.

Joan Ganz Cooney Center, 2014.

...but some families are "under-connected."

33% of low-to-moderate-income families do not have high-speed home access.

Mobile-only access is a form of under-connectedness.

- 66%
- 23%
- 5%
- 5%

Legend:
- High-speed home access
- Mobile-only access
- Dial-up home access
- No personal access
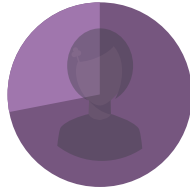
Joan Ganz Cooney Center, 2016.

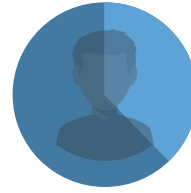# The Internet and digital media are a large part of families' lives.

At least **88%** of American adults use the Internet.

Pew Research Center, 2017.

At least **72%** of children ages 0 to 8 have used mobile media devices, such as apps and tablets.
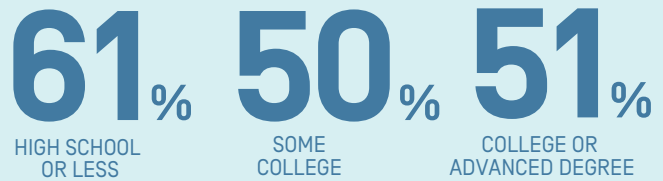
Common Sense Media, 2013.

At least **34%** of children ages 2 to 10 use educational media every day.

Joan Ganz Cooney Center, 2014.

Parents are using new tools to find resources.

Percent of parents of 2-to-10-year olds who want more information about how to find educational media, by parental education:
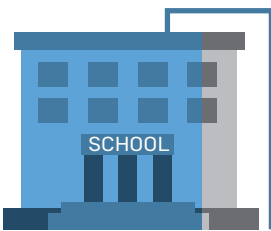
61% HIGH SCHOOL OR LESS

50% SOME COLLEGE

51% COLLEGE OR ADVANCED DEGREE

Joan Ganz Cooney Center, 2014.

69% of parents say that if they knew more positive parenting strategies, they would use them.

Zero to Three, 2016.

And while schools are trying to build better networks for in-classroom use...

In 2016, **88%** of school districts were meeting the Federal Communications Commission's minimum connectivity goal of 100 kbps, connecting students to high-speed broadband at school.

Education Superhighway, 2016.

...many community-based institutions will need a boost to modernize and coordinate efforts to help today's families.

Pew Research Center, 2013.

85% of Americans ages 16 and older say that libraries should definitely coordinate more closely with schools.

Parents earning less than $50,000 per year say the library helps them find information for their children, allows free access to the Internet, and provides quiet study spaces, broader selections of e-books, and more interactive learning.

American Library Association, 2016.

Yet only...

22% of libraries offer device mentoring.

And only **2%** of those offer mentoring services to non-native English speakers for multilingual devices.

Association for Library Service to Children, 2015.

HOW TO LEAD A COMMUNITY THROUGH STAGES OF DEVELOPMENT

This agenda is for mayors and members of their cabinets, school superintendents and other school leaders, city council members and county supervisors, leaders of community organizations, library and museum directors, leaders in higher education, community philanthropists, and any other decision makers who focus on families and young children. To build more advanced systems for family engagement and early learning, these leaders may find it useful to think of their community as moving through various stages of development. Within each of the four action steps in the following pages, we have provided information for communities at the very beginning ("Getting a Good Start"), for those who are already testing new approaches ("Making Progress"), and for those who have achieved enough to promote and build on their successes ("Sharing with Others and Scaling Up").

Getting a Good Start

1. Form an initiative with the backing of key champions from policy, practice, philanthropy, and research.

2. Conduct community needs assessments by neighborhoods or subgroups.

3. Seek out parents in high-need areas for their expertise; include them on leadership teams and committees.

4. Reach consensus (among community leaders, educators, parents, and caregivers) on where to focus efforts and how to measure success.

Making Progress

5. Create a plan to collect evidence of success.

6. Pilot an approach (or multiple approaches) and collect evidence of impact in community organizations (libraries, schools, nonprofits, etc.).

Sharing with Others and Scaling Up

7. Share results widely and discuss next steps with families, educators, and other stakeholders.

8. Promote and enact policies (including financial and professional supports) that will sustain efforts over time.

9. Share lessons with leaders of other communities.

FOUR INTERLOCKING ACTIONS TO HELP COMMUNITIES PRIORITIZE

Take stock of family engagement offerings and online connectivity with an eye toward equity and diversity.

1

Develop professional learning programs that build corps of **media mentors.**

2

Create a continuous cycle of improvement using research and evaluation.

4

Invest in physical infrastructure that promotes connectivity and meaningful participation.

3

1

Take stock of family engagement offerings and online connectivity with an eye toward equity and diversity.

Why?

When parents are stressed, isolated, and lack information about child development, they are less likely to know how to help their children grow and learn. The recent National Academies report, *Parenting Matters*, calls for a stronger system for supporting parents. Community leaders must do more than pay lip service to parents or appoint them as token members of committees. They need to learn about parents' daily lives—such as their need for greater economic security as well as their strengths in the face of adversity—and understand how these realities and technology are reshaping routines and methods for staying informed. Surveys by the Joan Ganz Cooney Center and Rutgers University show that families rely on online networks yet many are also under-connected. For example, nearly one-quarter of families below the median income level in the U.S. rely on mobile-only Internet access. Communities will need to reduce these disparities in connectivity if they are to build an ecosystem that supports information-sharing and relationship-building between the parents, teachers, and other adults in children's lives.

How?

This will require a two-pronged approach: collect and examine data on whether community systems and programs—libraries, home visiting and family engagement programs, health and school-linked initiatives—are working to promote early learning and effective parenting, while also examining the online networks and resources available to those families.

Community programs + Digital equity = Families learning
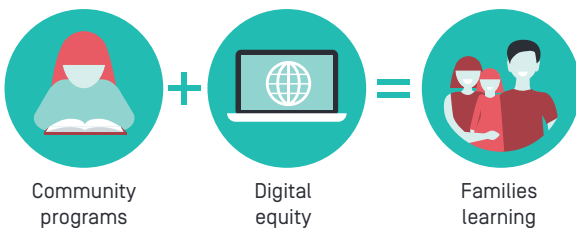
Getting a good start

- Identify champions and a governmental or non-profit organization to spearhead an initiative using "collective impact" approaches that build consensus among multiple agencies and organizations about community-wide goals for modernizing early learning.
- Re-invigorate existing councils, such as local and state Early Childhood Advisory Councils funded under the Obama administration.
- Empower parents or other caregivers to be actively involved on these councils.
- Analyze local information to pinpoint specific neighborhoods and subgroups that need more attention, such as families who speak a language other than English at home.
- Match that data with information on the availability of 21st-century resources or services most helpful to those families, including opportunities to go online to gather information or find educational media.

A Community in Action

In 2016, the Silicon Valley Community Foundation (**Mountain View, CA**) funded a series of polls and surveys of educators and parents in three counties to better understand their needs, to examine potential disparities in tech use, and to learn about community members' attitudes toward digital media in family life. The data became grist for a roundtable discussion with stakeholders, educators, and parents to identify the most important gaps to fill.

Making progress

- Use collected data as a hook for convening parents, educators, local information technology experts, and others in a discussion of priorities and missing data points.
- Discuss which gaps exist on the role of technology in various early learning settings.
  - Is broadband available in all publicly supported early learning centers, libraries, community centers, and schools?
  - What is the state of home access for low-income, rural, and immigrant families?
- Go beyond physical infrastructure. Consider the workforce.
  - What is missing for educators, librarians, home visitors, and other professionals who work with families?

Sharing with others and scaling up

- Lay out a collective vision for building a Digital-Age early learning ecosystem in your community.
- Acquire sign-off from policymakers, practitioners, researchers, and parent leaders on a multiyear plan to modernize early learning and family engagement efforts.
- Proceed with better coordination, financing, and staffing across existing efforts.
- Make your work visible, in local media, and among non-governmental funders who are committed to spreading and scaling up innovation.

A Community in Action

Consider the example of the Remake Learning Council in **Pittsburgh, PA**. Led by a robust public-private partnership representing the City of Pittsburgh, Allegheny County, and the broader metro region extending into West Virginia, the Council includes executives and learning scientists in business, higher education, public education, civic and cultural organizations, foundations, and government who can help the region "remake learning." The Council takes into account how digital media is changing the way families, children, and educators connect. It supports activities throughout the region that bring families and learners together and provides strategic recommendations to city, county, and state leaders. In 2016, the Council hosted its first-ever Remake Learning Days, billed as the "world's largest open house for the future of learning," with 273 events in one week that attracted more than 30,000 families, caregivers, and youth.

2 Develop professional learning programs that build corps of media mentors.

Why?

Over the years, many national research institutions have called for an increase in training opportunities for professionals who work with parents and other family members, especially those who are vulnerable due to economic hardship and deficits of opportunity. National projects such as the Aspen Institute's Ascend and New America's Family Centered Social Policy Initiative have raised awareness of the need for policies and investment that take a two-generation approach, focusing on children and their adults at the same time. Around the country, local organizations and educational institutions are recognizing the need to expand

that kind of outreach via new technology. New America and the Joan Ganz Cooney Center's national mapping project, *Integrating Technology in Early Literacy*, illustrates how many program interventions around the country are actively experimenting in this way. However, these programs are finding that a digital skills gap exists among today's teachers, family engagement specialists, home visitors, and librarians. They can neither provide advice nor exercise best practices with technologies they themselves have not been given time and training to use.

How?

Increasingly, models for modernizing the workforce are emerging from professional organizations such as the Association of Library Service to Children (part of the American Library Association), which aims to train and support a new cadre of media mentors. Early childhood leaders, such as those affiliated with the National Association for the Education of Young Children, are also spreading the word through books, forums, and professional development institutes. Both groups point to the need for comprehensive training systems that show early learning professionals and others who work directly with caregivers and parents how to wisely deploy digital media and how to become better at evaluating the benefits and pitfalls of various technologies.

A Community in Action

In **Addison, IL**, the public library created a twice-weekly, dual-language "Homework Help" program to help children who have no Internet access at home. Two bilingual members of the library staff and a group of volunteers are on hand to help them understand assignments and find materials. (For older children and teens, the homework helpers guide them in online research, creating digital documents, and accomplishing other tasks, both online and off.) As a result of these sessions, the staff discovered that parents, too, need assistance with online activities. Families can now make appointments for one-on-one help. As described in the book *Becoming a Media Mentor*, this helped staff realize that the traditional library departments, in which a children's section is in one place and resources for adults are in another, "may not best serve families in the community."

Getting a good start

- Create a comprehensive list of current professional development programs in the community that are well suited for building a cadre of media mentors.
- Compare that list with data on families' and educators' needs to identify gaps to be filled and resources that are underutilized.
- Work with local universities and statewide systems of educator preparation and digital literacy.
    - Learn from specialists who host workshops for librarians, social workers, home visitors, and early interventionists.
    - Create task forces that include representatives from higher education and the city or state's information technology department to help reimagine the early learning training pipeline.
    - Make connections to science, technology, engineering, and math (STEM) by supporting educators to help early learners through exploration and guided play.
- Find agreement on what aspects of professional learning can be delivered online or by combining online and face-to-face methods.

Sharing with others and scaling up

- Expand efforts to bring media mentors to families when and where they most need them.
    - Consider partnerships with hospitals that can distribute materials to, and establish new relationships with, parents of newborns.
    - Relocate materials, staff members, and services to make them easy for parents to find.
- Share materials that prove useful for professional development around media literacy.
    - Aim for the development of open educational resources (OER) and share with the larger educational community by partnering with the national Learning Registry.
    - Use the power of local public media stations as distributors of information and activators of community conversations about skill-building.

Making progress

- Build on the momentum in public library systems. Librarians around the country are becoming vocal about the need for new training and for expanding mindsets about how libraries can help families.
- Help early learning centers, libraries, and schools advocate for more funding for staff to participate in media mentorship programs, especially for those who work in underserved neighborhoods.
- Show real-life examples of the impact of media mentorship.
    - Use local press and city festivals to showcase digital story time programs, maker spaces, and other tech-and-media advisory programs to wider audiences than "friends of the library" groups.
- Connect library activities to school district efforts, whether they are focused on digital literacy, family engagement, or some combination of the two.
    - Tap into the movement for "Future Ready Schools" and "Future Ready Librarians" led by the Alliance for Excellent Education.

A Community in Action

Baltimore County Public Schools (BCPS) in **Baltimore, MD** is part of the League of Innovative Schools led by the national organization Digital Promise. BCPS works with nearby Towson University to "rebrand" school library media specialists and ensure they have the skills to teach information technology and digital literacy. The school district is also employing Common Sense Education's resources and curricular materials, including its Digital Citizenship Scope and Sequence, to guide educators as they introduce how to use the Internet and digital media. The sequence starts in kindergarten as children are introduced to examples of how people communicate online and given opportunities to explore digital activities designed for young kids. It continues through 12th grade in coordination with materials that are distributed to parents, such as Common Sense Media's family tip sheets.

3

Invest in physical infrastructure that promotes connectivity and meaningful participation.

Why?

Recent research attests that low-income families and communities continue to be under-connected to vital digital infrastructure in their homes and educational settings. About one in three low-income immigrant families has mobile-only access at home, making it difficult to complete homework assignments or apply for government services and jobs. And many schools lack the connectivity to meet the Federal Communications Commission's short-term goals of adequate speeds in schools. While corporate and nonprofit partnerships have expanded access to technology for low-income students and families, including national commitments from the ConnectEd program and the

FCC's Lifeline program, these initiatives have not yet covered early learning centers or low-income housing in a comprehensive way. Educators in these settings need access to online learning communities so they can meaningfully collaborate with colleagues in libraries, public media stations, and independent organizations. The lack of basic infrastructure further constrains innovative forms of family engagement. For example, text-messaging programs to reach parents are increasingly popular, but families need more data and bandwidth to take advantage of the tips and advice that come to them via streaming videos and other rich forms of multimedia.

How?

Community leaders should create platforms and commissions that allow for more intersections between the early learning and education worlds and the worlds of information technology and physical infrastructure planning. The buildout of high-speed networks and wireless access points should be integrally connected to the needs of families and learning environments.

Getting a good start

- Set up spaces and formal mechanisms for relationships to deepen between those who work most closely with children and families and those who are leading efforts to expand Internet access and upgrade public facilities such as libraries, schools, and recreation centers.

- Determine which community leaders are already part of national networks focused on improving connectivity, such as the Next Generation Cities network and the Community Connectivity Initiative (led by the U.S. Department of Commerce's National Telecommunications and Information Administration).
- Connect these leaders to those who are working to improve early learning systems.
- Gather stories. As called for in the recent National Broadband Research Agenda, local leaders need to showcase how a lack of connectivity may be affecting low-income households or particular neighborhoods and public housing projects.

- Assess the role of community anchor institutions for broadband access, such as libraries and schools.
  - Measure connectivity speeds and service at the sites where families and children are trying to get online. Use tools offered by Measurement Lab or Google Fiber Speed Test to assess speeds.
- Gather survey data or conduct focus group interviews on smartphone use to find out which families are under-connected and whether they are hitting their data limits each month. Surveys can also help determine which populations of teachers and librarians experience inconsistent access to high-speed Internet.

Making progress

- When building or upgrading community centers, libraries, and other learning spaces, optimize them for joint engagement between adults and children, where caregivers and children can learn and create using digital and non-digital tools.
- Set specific goals for connectivity, including Internet speed targets.
  - Use the benchmarks for school systems described in the annual reports from Education SuperHighway and consider how to apply them community-wide.
- Prioritize fiber-optic networks.
  - Enact "dig once" regulations that require projects involving digging up roads and sidewalks to be used as opportunities for laying extra fiber for connectivity.

A Community in Action

"Dig once" was the tack taken by **Santa Monica, CA**, a member of the Next Century Cities network, when it received a grant to connect traffic signals to mitigate road congestion. According to a recent Next Century Cities report on the city's effort, "the cost of the extra fiber was quite small but [it] creates many opportunities for community benefits." With fiber in place, leaders can offer interactive platforms and learning materials, including streaming video, throughout community centers and other learning spaces in the city.

Sharing with others and scaling up

- Enlist researchers from outside institutions to help understand community connectivity needs.
  - Partner with a nearby university or research institution to conduct surveys, analyze data, and distribute reports of lessons learned.
- Explore new public-private agreements with Internet service providers.
- Involve the owners of local shops and gathering places, such as eateries, fast-food restaurants, places of worship, coffee shops, bodegas, laundromats, bus stations, and more.
- In rural areas or in smaller communities, link up with neighboring towns to create regional co-ops and other partnerships that can help to share costs.

A Community in Action

Alexandria City Public Schools in **Alexandria, VA**, recently teamed up with New America for a pilot project to assess whether the district's Internet connectivity was robust enough to support deep online learning throughout its classrooms. The project combined the use of M-Lab tools for measuring broadband speeds and service with more traditional surveys and interviews to capture a portrait of what educators experience as they conduct daily activities in their classrooms. The year-long research project will culminate this summer in a public report and policy recommendations for school, community, and state leaders.

4

Create a continuous cycle of improvement using research and evaluation.

Why?

Leaders should set up a system for evaluating what is working and making midcourse corrections (or wholesale changes) to ensure families and children are being well served. For example, the burgeoning use of technological tools such as text-messaging in family engagement and early literacy development is still, for the most part, experimental. Community leaders should evaluate these tools to determine if they are effective and to isolate the impact of a particular technology in achieving program goals.

New America and the Joan Ganz Cooney Center's Integrating Technology in Early Literacy project outlined four stages of evaluation for these kinds of interventions: developing, emerging, promising, and strong. Promising programs have gathered data on effectiveness that goes beyond user feedback and evaluations and feature research conducted by an independent institution. Strong programs have conducted a randomized controlled trial to better isolate what contributed to their success.

How?

Setting up a system for evaluation and continuous improvement requires a clear vision of what a new program or initiative should achieve. This requires close alignment with the previous three steps of this action agenda: taking stock of what needs more focus and attention; creating systems to improve the workforce; and upgrading elements of the community's physical infrastructure.

Getting a good start

- Avoid a focus on technology itself as the end goal. Goals should be couched in terms of building relationships with and within families and in early learning goals supported by the science on how children learn.
- Where possible, design evaluations that reflect input from families and their children.

A Community in Action

Mississippi Public Broadcasting (MPB) is working with educators at Dawson Elementary School in **Jackson, MS** to develop afterschool programs for children in pre-K through second grade as part of a broader effort to provide media resources that match community and family needs. Activities blend hands-on learning with digital media to explore specific topics. According to an MPB blog post, one afterschool session, for example, focused on the skeletal system. Children viewed *Dinosaur Train: Journey to Fossil Alley* and *Sid the Science Kid: Bones Investigation*, read the book, *How Do Dinosaurs Say I Love You?* and engaged in a craft project that helped them make an "X-ray" of their hands. The effort is funded by the U.S. Department of Education's Ready to Learn program, which is focusing current efforts on how to engage parents and educators within specific communities.

Recently, the research firm MDRC completed a study of a high-school initiative that could provide lessons for early education programs as well. In **New York City**, MDRC partnered with New Visions for Public Schools to evaluate whether a text-messaging program could improve high school students' attendance. The evaluation found that the text messages geared toward parents provided no benefit. Those results provide an opportunity to consider how to tailor messages to parents in ways appropriate to the age of their children; parents of younger children have more control over transportation and daily routines that affect attendance. With these results, leaders at New Visions were able to better target the tech-assisted component of their program.

Making progress

- Forge partnerships with local universities or other independent research organizations.
- Set up experiments to compare similar projects and include control groups to better measure impact.

Sharing with others and scaling up

- Create resources to share with leaders in other communities who want to hear how and why your approach worked.
- Learn from national models, such as the Frontiers of Innovation at the Harvard Center for the Developing Child, which has built a network across multiple program sites for a new approach to rapid-cycle iterative testing of new family strengthening approaches.
- Incorporate families' voices and preferences in the tweaking and improvement of programs so parents and caregivers can help to sustain them and build more public will for expansion.

In **Pittsburgh**, where new projects are tested and tweaked at a rapid pace, the Remake Learning Network created a playbook to disseminate "the project code" for building innovative learning ecosystems. The Playbook, which exists as both an e-book and an interactive website, contains explainers, case studies, and dozens of "plays" that a community can run. Examples include awarding "catalytic grants," creating research fellowships, hosting "lunch and learn" meetings, and setting up spaces for user testing.

THE ULTIMATE AIM: THRIVING KIDS AND FAMILIES

Remember the kindergarteners picking out artwork at the beginning of this brief? They will grow into the middle schoolers of the next decade, the high school graduates of 2030, and the workforce of the future. By paying close attention to the ways in which technologies and media may be deployed to promote new connections that advance critical skills and learning pathways—and by ensuring that educators, mentors, tech developers, and parents are prepared to help youngsters navigate a rapidly changing world—these children can grow into adults who will keep our communities vibrant and flourishing. By combining the best of early learning and family engagement with an intentional and research-based approach to technological investments, every community in the U.S. can create an ecosystem that will help these children succeed and thrive.

RESOURCES

The following resources can support community leaders in modernizing their family engagement and early learning plans. Over the coming years, New America and the Joan Ganz Cooney Center will continue to support communities by creating additional toolkits, fostering networks, and providing policy and research guidance.

Claudia Haines, Cen Campbell, and the Association for Library Service to Children, *Becoming a Media Mentor: A Guide for Working with Children and Families* (Chicago: American Library Association, 2016), **http://www.alastore.ala.org/detail. aspx?ID=11720**.

Rachel Black and K. Sabeel Rahman, *Centering the Margins: A Framework for Equitable and Inclusive Social Policy* (Washington, DC: New America, January 2017), **https://www.newamerica.org/family-centered-social-policy/policy-papers/centering-margins/**.

EveryoneOn, "ConnectED Initiative," **http://everyoneon.org/about/connected/**.

Common Sense Education, "Connecting Families," **https://www.commonsensemedia.org/educators/connecting-families**.

Connecting 21 st—Century Communities: A Policy Agenda for Broadband Stakeholders (Washington, DC: Next Century Cities, July 2015), **http://nextcenturycities.org/wp-content/uploads/NCCPolicyAgenda_Web.pdf**.

Early Childhood—LINC, *Early Learning Communities: Building Blocks for Success* (Washington, DC: Center for the Study of Social Policy and the National League of Cities, 2016), **http://www.cssp.org/media-center/blog/text/Building- Blocks-for-Success.pdf**.
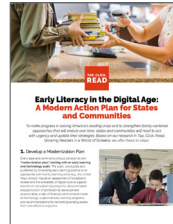
"Early Literacy in the Digital Age: A Modern Action Plan for States and Communities," tip sheet developed for tapclickread.org, **http://www. tapclickread.org/wp-content/uploads/2016/05/2016.07.26_NA_TCR_CommunitySteps.pdf**.

Early Childhood STEM Working Group, *Early STEM Matters: Providing High-Quality STEM Experiences for All Young Learners* (Chicago: University of Chicago and Erikson Institute, January 2017), **http://d3lwefg3pyezlb.cloudfront.net/docs/Early_STEM_Matters_FINAL.pdf**.

Education SuperHighway, "2016 State of the States," **http://stateofthestates.educationsuperhighway.org/**.
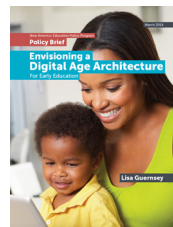
Lisa Guernsey, *Envisioning a Digital Age Architecture for Early Education* (Washington, DC: New America, March 2014), **https://www.newamerica.org/education-policy/policy-papers/envisioning-a-digital-age-architecture-for-early-education/**.

Chip Donohue, ed., *Family Engagement in the Digital Age: Early Childhood Educators as Media Mentors* (New York: Routledge, 2017), **https://www.routledge.com/Family-Engagement-in-the-Digital-Age-Early-Childhood-Educators-as-Media/Donohue/p/book/9781138100367**.

Center on the Developing Child, Harvard University, Frontiers of Innovation, R&D platform, **http://developingchild.harvard.edu/innovation-application/frontiers- of-innovation/**.

RESOURCES

Future Ready Schools, project of Alliance for Excellent Education (Washington, DC), "The Future Ready Framework," **https://dashboard.futurereadyschools.org/framework**.

Google Fiber, Speed Test, **http://speedtest.googlefiber.net/**.

Shayna Cook, "Integrating Technology in Early Literacy (InTEL)," map, New America, August 2016, **http://atlas.newamerica.org/tech-early-literacy**.

Shayna Cook, *Integrating Technology in Early Literacy: A Snapshot of Community Innovation in Family Engagement* (Washington, DC: New America, August 2016), **https://na-production.s3.amazonaws.com/documents/InTEL-Paper.pdf**.

Federal Communications Commission, "Lifeline Program for Low-Income Consumers," **https://www.fcc.gov/general/lifeline-program-low-income-consumers**.

Measurement Lab at New America, Open Technology Institute, **https://www.newamerica.org/oti/measurement-lab/**.

Learning Registry, a joint effort of the Department of Education and the Department of Defense, **http://learningregistry.org/**.

Association of Library Service to Children, "Media Mentorship in Libraries Serving Youth," list of resources, **http://www.ala.org/alsc/publications-resources/white-papers/mediamentorship**.

National Telecommunications & Information Administration, *National Broadband Research Agenda: Key Priorities for Broadband Research and Data* (Washington, DC: U.S. Department of Commerce, January 2017), **https://www.ntia.doc.gov/files/ntia/publications/nationalbroadbandresearchagenda-jan2017.pdf**.

Victoria Rideout and Vikki S. Katz, *Opportunity for All? Technology and Learning in Lower-Income Families* (New York: Joan Ganz Cooney Center at Sesame Workshop, 2016), **http://www.joanganzcooneycenter.org/wp-content/uploads/2016/01/jgcc_opportunityforall.pdf**.
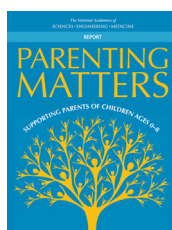
Vivian L. Gadsden, Morgan Ford, and Heather Breiner, eds., *Parenting Matters: Supporting Parents of Children Ages 0–8* (Washington, DC: National Academy of Sciences, 2016), **https://www.nap.edu/catalog/21868/parenting-matters-supporting-parents-of-children-ages-0- 8**.

Gregg Behr and Lynne Schrum, "Introduction," in *Playbook: Building Collaborative Networks for Teaching and Learning* (Pittsburg, PA: Remake Learning Network, 2015), **http://downloads.sproutfund.org/playbook/remake-learning-playbook-20151022.pdf**.

Common Sense Education, *Scope & Sequence: Common Sense K–12 Digital Citizenship Curriculum*, **https://www.commonsensemedia.org/sites/default/files/uploads/classroom_curriculum/cs_digital citizenshipcurric_2016_release.pdf**.

Elisabeth R. McClure, Lisa Guernsey, Douglas H. Clements, Susan Nall Bales, Jennifer Nichols, Nat Kendall-Taylor, and Michael H. Levine, *STEM Starts Early: Grounding Science, Technology, Engineering, and Math Education in Early Childhood* (New York: Joan Ganz Cooney Center at Sesame Workshop, 2017), **http://www.joanganzcooneycenter.org/wp-content/uploads/2017/01/jgcc_stemstartsearly_final.pdf**.

Two-Generation Playbook (Washington, DC: The Aspen Institute, September 2016), **http://b.3cdn.net/ascend/5e6780f32400661a50_pgm6b0dpr.pdf**.