Caregiver-Child Shared Reading as a Strategy for Early Literacy Development

Evidence Supporting the Ohio Governor's Imagination Library
Research Brief

Laura M. Justice, PhD, Jamie O'Leary, MPA, & Caitlin Lennon, MA
November 2021

crane.osu.edu

A multidisciplinary research center dedicated to conducting high-quality research that improves children's learning and development at home, in school, and in the community.

Overview

The Ohio Governor's Imagination Library, founded in 2019, is a state-wide initiative designed to promote early literacy development in Ohio's children from birth to 5 years. Designed in partnership with and modeled after Dolly Parton's national Imagination Library initiative, which began in Tennessee in 1995, Ohio's program partners with local public libraries and other affiliates to make books accessible to young children across the state. Currently, nearly 42% of eligible Ohio children are enrolled in the program, which translates to almost 300,000 children receiving one book per month to build their home libraries.

Caregiver-child shared reading in the home environment is an evidence-based approach to facilitating young children's early literacy development, as substantiated by numerous studies conducted over the last two decades. Given its strong research base, efforts to promote caregiver-child shared reading are largely focused on identifying ways to *scale* this practice into homes via various strategies, including free book distribution. This research brief provides an overview of (1) the evidence behind caregiver-child shared reading in the home, (2) the evidence on book-sharing programs such as Imagination Library as a means to scale this practice, and (3) Imagination Library's enrollment across the state of Ohio.

The Evidence on Caregiver-Child Shared Reading at Home

The birth-to-five period of life is critically important to the development of foundational skills that facilitate children's transition to formal schooling at kindergarten. For most children, the kindergarten transition represents the child's first introduction to formal reading instruction, that is, the explicit teaching of sound-symbol correspondence and reading comprehension. Children who arrive to kindergarten with foundational reading skills in place are positioned to excel in this new learning environment (Claessens, Duncan, & Engel, 2009).

Learning activities within the home during the birth-to-five period are instrumental for enhancing children's foundational reading skills. For instance, numerous studies conducted by Crane Center investigators show that caregiver-child shared reading in which the caregivers talk about print in the book significantly increases young children's alphabet knowledge and print awareness (e.g., Justice & Ezell, 2000; Justice, Skibbe, McGinty, Piasta, & Petrill, 2011) and lead to long-term advantages in reading achievement (Piasta et al., 2012). More generally, studies show that a heightened volume of caregiver-child shared reading is associated with enhanced kindergarten readiness and foundational reading skills (Justice, Logan, Işıtan, & Saçkes, 2016; Sawyer et al., 2014), and helps to minimize screen time in the home (Khan et al., 2017). Consequently, numerous efforts are underway to promote caregiver-child shared reading within the home during the birth-to-five period.

Despite the benefits that caregiver-child shared reading can yield, reading books to young children is not a customary habit for many caregivers with young children. Nationally representative data suggest that as much as one-half of caregivers with young children seldom read to their children (see Khan et al., 2017). Caregivers may not read to their young children because they do not understand the benefits that this activity provides to children; or, they may not read to their children because they do not read well themselves (Justice, Logan, & Damschroder, 2015). Additionally, caregivers may not read to their young children because they do not have access to books. Studies by Neuman and colleagues have shown significant disparities among U.S. communities in terms of books available for young children (Neuman & Celano, 2001; Neuman & Moland, 2019). In their most recent study, Neuman and Moland described "stark disparities" in children's access to books across communities, characterizing some communities as "book deserts" that provide young children very limited access to print materials in the early childhood years. The authors argue that these disparities can significantly hinder young children's ability to develop foundational reading skills and readiness for kindergarten.

In the educational sciences, when evidence-based practices and programs are well-established – that is, are shown to provide significant benefits to recipients – scientific efforts seek to identify avenues to scale these practices to reach a larger number of recipients. With respect to caregiver-child shared reading, the scientific evidence is unequivocal with respect to the benefits it provides to young children's development of foundational reading skills. That is, shared reading practices definitively improve children's alphabet knowledge, print awareness, and language skills, such as vocabulary (Bus, Van IJzendoorn, & Pellegrini, 1995; Mol, Bus, de Jong, & Smeets, 2008). To this end, scientific efforts are focused on identifying ways to scale caregiver-child shared reading practices into every home so that all children can derive benefits from this practice. Scientists seek to identify barriers that inhibit this practice as well as enablers that promote this practice. One such enabler is ensuring that every home is equipped with the core materials needed to facilitate caregiver-child shared reading, namely children's storybooks.

Book Distribution Programs: The Logic and Evidence behind Scaling Caregiver-Child Shared Reading

How do book distribution programs improve early literacy?
Book distribution programs attempt to address disparities in access to children's storybooks by getting books into the hands of families and children. The theory of change behind book distribution programs is simple: Providing storybooks to help build a home library can foster young children's interest in books and reading, increase the frequency of caregiver-child reading in the home, and expand literacy resources available in the home. In combination, these phenomena can enhance children's progress towards key developmental milestones and school readiness at age five.

Book distribution programs for summer learning loss
Book distribution programs have long been used a strategy to address summer learning loss, also known as the "summer slide." In one study, for instance, eight books were distributed to 552 third- to fifth-grade students attending an urban high-poverty school during the summer months via mail as a means to address summer learning loss (Kim, 2006). Study findings suggested that the summer book distribution promoted reading activities and reading achievement over the summer months, especially for Black and Hispanic students.

Book distribution programs and home-reading practices
Book distribution programs also are used to promote caregiver reading to their young children. One of the most well-known approaches is the Reach Out and Read program implemented in pediatric primary care clinics. Reach Out and Read provides age-appropriate children's books at well-child visits from birth to age 5; overall, children accumulate a library of about 8 or 9 books through this program (Klass, Dreyer, & Mendelsohn, 2009). A large number of studies have evaluated the effects of Reach Out and Read (e.g., Diener, Hobson-Rohrer, & Byington, 2012; Sharif, Rieber, Ozuah, & Reiber, 2002; Weitzman, Roy, Walls, & Tomlin, 2004); such work generally seeks to determine whether providing books to parents with young children will directly lead to increases in home-reading practices. In their sum, study findings suggest that Reach Out and Read promotes home-reading practices and children's foundational skills, although not all parents use the books provided to read regularly to their children. Specifically, about one-third of parents report rarely reading books with their children (Rikin et al., 2015) and attrition from Reach Out and Read can be quite high. This signals the need to understand why book distribution efforts do not always lead to the intended behaviors and, perhaps more importantly, the barriers to maintaining caregivers and children in these programs. Additionally, research also is needed to improve understanding on how to increase the frequency of home-based reading sessions, high-quality caregiver-child reading interactions, and implementation of effective shared reading strategies.

The evidence on Imagination Library
Dolly Parton's Imagination Library, upon which the Ohio Governor's Imagination Library is modeled, is the largest book distribution program of which we are aware. It strives to provide all children from birth to age 5 years with one book per month to build their home libraries, with participating children able to accumulate up to 60 books by their fifth birthday. Several studies have examined the effects of Imagination Library on home-based reading activities and children's language and literacy development.

A 2016 report describing two studies examined the effects of Imagination Library on caregiver-child literacy interactions and children's school readiness (Thompson, Klemp, & Stinson, 2016). The first study featured interviews with 112 families of kindergarten students – half were participants in Imagination Library and half were not – and found that participating families experienced increased quality of reading interactions between children and caregivers, compared to non-participating families. The second study examined children's readiness based on measures of emergent literacy and social-emotional skills for 378 kindergarten students, approximately one-half of whom had participated in Imagination Library. This study found no significant differences on these measures for Imagination Library participants and their non-participating peers. Looking at the results of these two studies, they counter previous studies on the positive effects of Imagination Library, suggesting there could be room for improvement within the program to positively impact children's literacy and school readiness.

Another study of Imagination Library involved 170 families participating in the program in Syracuse, New York (Ridzi, Sylvia, & Singh, 2014). Of interest was program effects on reading in the home, and study findings suggested that about one-third of participating families read daily to their children. Study authors noted that parents who were long-standing program participants tended to read more often with their children, suggesting the importance of maintaining families in the program for longer periods of time.

Most recently, Szumlas and colleagues (2021) examined the effects of a program featuring a combination of Reach Out and Read and Imagination Library on the Ohio kindergarten readiness assessment (KRA) scores. The program combined these two programs so that its key features were parent-directed guidance on home-reading practices *and* increased number of books in the home. Researchers examined the Ohio KRA literacy scores for 797 kindergarten-aged children in three separate cohorts. The percentage of participants "on-track" on the KRA increased by cohort year, with 43% on-track in 2016-2017, 51% in 2017-2018, and 58% in 2018–2019. The findings suggest that coupling the Read out and Read program with Imagination Library may have a positive impact on kindergarten readiness as measured by the state's primary kindergarten assessment tool.

The Ohio Governor's Imagination Library: Enrollment after Two Years of Implementation

Presently, the Ohio Governor's Imagination Library has reached almost 42% of Ohio's eligible children, representing 292,608 children between the ages of birth and age five. Table 1 depicts all of Ohio's 88 counties sorted by the percentage of eligible children enrolled in Imagination Library in the county. It also lists several variables drawn from the U.S. Census to demonstrate the racial and economic characteristics within a given county. These include the median household income, percent of residents identifying as a race other than white, and percent of persons in poverty in each county. For the median household income column, cells that are shaded in green show median household incomes that are above Ohio's average median household income of $56,602; red are below that average. In the column showing percent of people living in poverty, red cells are those counties in which poverty rates are above the state average of 13.1%; green represents those that are below.

Table 1
Ohio counties by Imagination Library enrollment

Ohio County	Number of Children Enrolled	Percent of Eligible Children Enrolled, October 2021	Median Household Income (in 2019 Dollars)	Percent of Persons in Poverty	Percent of Residents who are People of Color
State Average	292,608	41.71%	$56,602	13.1%	18.3%
Shelby County	2,312	65%	$63,806	9.1%	6.1%
Logan County	1,804	60%	$56,754	10.5%	5.3%
Miami County	3,690	58%	$61,041	8.8%	6.6%
Lawrence County	2,217	57%	$45,118	16.2%	4.5%
Erie County	2,305	55%	$54,226	11.6%	13.3%
Greene County	4,998	55%	$68,720	9.9%	13.9%
Darke County	1,871	53%	$55,620	12.1%	2.8%
Knox County	2,033	53%	$57,749	11.3%	3.4%
Mercer County	1,531	53%	$62,952	6.7%	3.5%
Hancock County	2,449	52%	$58,450	9.3%	6.3%
Hardin County	1,057	52%	$50,506	13.9%	3.7%
Jefferson County	1,835	52%	$46,581	17.1%	8.6%
Muskingum County	2,765	52%	$47,254	15.3%	7.8%
Mahoning County	6,531	51%	$46,042	18.4%	19.7%
Williams County	1,159	51%	$53,183	9.3%	3.4%
Adams County	969	50%	$39,079	19.1%	2.9%
Athens County	1,326	50%	$40,905	26.6%	8.8%
Gallia County	989	50%	$44,858	16.5%	5.7%
Lorain County	8,985	50%	$58,427	13.9%	13.8%
Pickaway County	1,615	50%	$63,633	11.5%	6.4%

Putnam County	1,292	50%	$64,822	7.2%	2.0%
Coshocton County	1,112	49%	$46,606	12.5%	3.5%
Meigs County	680	49%	$44,899	15.8%	2.9%
Licking County	5,068	48%	$64,589	9.3%	9.2%
Auglaize County	1,437	47%	$64,074	7.3%	2.8%
Jackson County	1,021	47%	$47,550	17.2%	3.2%
Summit County	14,721	47%	$57,181	14.2%	21.8%
Union County	1,714	47%	$86,715	5.4%	9.5%
Warren County	6,650	47%	$87,125	4.5%	12.1%
Clark County	4,030	46%	$50,873	14.6%	13.1%
Clinton County	1,238	46%	$52,815	14.8%	5.3%
Hamilton County	24,721	46%	$57,212	14.6%	32.4%
Highland County	1,334	46%	$44,169	15.6%	4.2%
Madison County	1,164	46%	$68,022	9.6%	10.0%
Pike County	858	46%	$42,832	19.1%	4.2%
Harrison County	420	45%	$49,689	14.5%	4.2%
Hocking County	787	45%	$52,363	15.0%	3.0%
Paulding County	602	44%	$55,330	9.8%	3.7%
Scioto County	2,103	43%	$41,330	21.9%	5.6%
Brown County	1,194	42%	$54,575	12.1%	2.9%
Fairfield County	3,940	42%	$67,609	8.1%	13.2%
Wayne County	3,260	42%	$58,300	9.9%	4.8%
Butler County	10,189	41%	$66,117	11.7%	16.0%
Champaign County	1,041	41%	$60,112	7.7%	5.4%
Richland County	3,055	41%	$49,547	13.5%	13.0%
Tuscarawas County	2,346	41%	$53,243	11.2%	3.7%
Wood County	2,806	41%	$62,390	11.2%	6.9%
Huron County	1,605	40%	$52,560	10.0%	3.9%
Marion County	1,551	40%	$47,498	14.8%	9.6%
Wyandot County	574	40%	$55,767	7.5%	2.6%
Cuyahoga County	29,472	39%	$50,366	16.2%	36.5%
Defiance County	970	39%	$59,931	8.8%	4.7%
Delaware County	5,064	39%	$106,908	4.8%	13.8%
Montgomery County	13,206	39%	$51,542	15.3%	27.0%
Perry County	933	39%	$50,150	15.0%	2.7%
Crawford County	967	38%	$44,971	14.7%	3.4%
Fayette County	784	38%	$47,308	13.6%	5.9%
Belmont County	1,310	37%	$50,904	11.6%	6.6%
Clermont County	5,069	37%	$66,968	8.2%	5.0%
Columbiana County	2,182	37%	48,345	13.2%	4.8%
Preble County	975	37%	$58,957	8.9%	3.1%

County	Enrollment	%	Median Income	Poverty	% Non-white
Allen County	2,411	36%	$53,131	12.9%	16.8%
Lucas County	10,676	36%	$48,736	18.0%	25.8%
Morrow County	809	36%	$59,452	8.5%	2.9%
Stark County	7,862	36%	$53,860	13.0%	12.0%
Vinton County	291	36%	$45,673	18.7%	3.0%
Guernsey County	861	35%	$45,917	15.5%	4.5%
Ottawa County	721	35%	$59,099	8.1%	3.0%
Medina County	3,543	34%	$76,600	5.5%	4.4%
Portage County	2,774	34%	$57,618	11.9%	9.2%
Ashtabula County	2,118	33%	$46,700	18.7%	7.0%
Geauga County	1,735	33%	$82,303	5.5%	3.1%
Ross County	1,538	33%	$51,092	15.2%	9.3%
Seneca County	1,178	33%	$52,500	12.1%	6.0%
Morgan County	289	32%	$42,341	15.7%	7.6%
Franklin County	26,160	31%	$61,305	13.5%	33.2%
Fulton County	846	31%	$63,092	6.9%	3.1%
Lake County	3,951	31%	$64,466	8.3%	8.4%
Monroe County	248	31%	$45,289	14.0%	2.4%
Trumbull County	3,654	31%	$47,280	15.4%	11.6%
Carroll County	492	30%	$55,267	11.3%	2.8%
Noble County	217	29%	$46,897	14.2%	4.5%
Henry County	467	26%	$59,695	7.5%	3.0%
Van Wert County	498	26%	$54,254	8.5%	3.4%
Washington County	799	25%	$50,021	11.0%	4.1%
Ashland County	758	23%	$52,823	12.6%	3.3%
Holmes County	931	23%	$63,753	9.2%	1.4%
Sandusky County	895	23%	$54,089	9.6%	6.9%

Note. Data on child participation rates provided by Ohio Imagination Library and are dated October 2021. Household median income, poverty rates, and percentages of non-white residents by county are derived from the U.S. Census Quick Facts at https://www.census.gov/quickfacts/fact/table/US/PST045219.

Descriptive statistics: Imagination Library in Ohio's 88 counties
The percentage of children enrollment in Imagination Library across Ohio's counties ranged from 23% to 65%, with the average being 41.6%. We examined the relationship among childhood participation rates and several community-level characteristics, including poverty rate, household median income, and racial composition. There was a significant positive correlation ($r = .278$, $p < .01$) between child enrollment and the percentage of persons of color within a community. Specifically, Imagination Library participation rates tended to be higher in counties with higher percentages of people of color. There was no significant correlation between child enrollment and poverty rates or median household income, suggesting that these community-level factors are not playing a role in Imagination Library uptake.

Conclusion

Caregiver-child shared reading in the home environment is a promising and evidence-based approach to facilitating young children's early literacy development. Programs like the Ohio Governor's Imagination Library are one tool to scale the practices of caregiver-child shared reading - specifically by providing books and enhancing home libraries to enable it as a practice in the home environment. A strong body of research literature suggests that book-scaling practices can be effective at amplifying the likelihood that adults will engage in caregiver-child shared reading.

Ohio's Imagination Library program has expanded to enroll nearly half of the state's eligible children within just two years, a feat made possible because of the state's investment in it as a tool for childhood literacy development and no doubt because of the many affiliated partners in each county, such as libraries, local United Ways, non-profits, community colleges, and others.

According to data examined in this brief, there is a positive correlation between childhood enrollment in the program and the proportion of people of color in a county, which may further suggest that Ohio's Imagination Library is an equitable way of expanding book access and literacy development among children birth to age five. There is still room to grow the program; Ohio counties of all geographic typologies (rural, suburban, and urban) and of all household median incomes levels have ample room to expand enrollment so that more children receive the benefits of the program.

Author Note

Correspondence concerning this brief report may be sent to Laura Justice at justice.57@osu.edu.

References

Bus, A. G., Van IJzendoorn, M. H., & Pellegrini, A. D. (1995). Joint book reading makes for success in learning to read: A meta-analysis on intergenerational transmission of literacy. *Review of educational research, 65*(1), 1-21.

Claessens, A., Duncan, G., & Engel, M. (2009). Kindergarten skills and fifth-grade achievement: Evidence from the ECLS-K. *Economics of education review, 28*(4), 415-427.

Diener, M., Hobson-Rohrer, W., & Byington, C. (2012). Kindergarten readiness and performance of Latino children participating in Reach Out and Read. *J Community Med Health Edu, 2*(133), 2.

Justice, L. M., & Ezell, H. K. (2000). Enhancing children's print and word awareness through home-based parent intervention. American Journal of Speech-Language Pathology, 9(3), 257-269.

Justice, L. M., Koury, A., & Logan, J. (2019). Ohio's Kindergarten Readiness Assessment: Does It Forecast Third-Grade Reading Success? Retrieved July 1, 2021 at https://crane.osu.edu/files/2020/01/Kindergarten-Readiness-Whitepaper_051619_SINGLES_WEB.pdf

Justice, L. M., Logan, J. A., Işıtan, S., & Saçkes, M. (2016). The home-literacy environment of young children with disabilities. *Early Child Res Q, 37*, 131-139.

Justice, L. M., Logan, J. R., & Damschroder, L. (2015). Designing caregiver-implemented shared-reading interventions to overcome implementation barriers. *Journal of speech, language, and hearing research, 58*(6), S1851-S1863.

Justice, L. M., Skibbe, L. E., McGinty, A. S., Piasta, S. B., & Petrill, S. (2011). Feasibility, efficacy, and social validity of home-based storybook reading intervention for children with language impairment. *Journal of Speech, Language and Hearing Research, 54*(2), 523.

Khan, K. S., Purtell, K. M., Logan, J., Ansari, A., & Justice, L. M. (2017). Association Between Television Viewing and Parent-Child Reading in the Early Home Environment. *Journal of Developmental & Behavioral Pediatrics, 38*(7), 521-527.

Kim, J. S. (2006). Effects of a voluntary summer reading intervention on reading achievement: Results from a randomized field trial. *Educational evaluation and policy analysis, 28*(4), 335-355.

Klass, P., Dreyer, B. P., & Mendelsohn, A. L. (2009). Reach out and read: literacy promotion in pediatric primary care. *Advances in pediatrics, 56*(1), 11-27.

Mol, S. E., Bus, A. G., de Jong, M. T., & Smeets, D. J. (2008). Added value of dialogic parent–child book readings: A meta-analysis. *Early Education and Development, 19*(1), 7-26.

Neuman, S. B., & Celano, D. (2001). Access to print in low-income and middle-income communities: An ecological study of four neighborhoods. *Reading research quarterly, 36*(1), 8-26.

Neuman, S. B., & Moland, N. (2019). Book deserts: The consequences of income segregation on children's access to print. *Urban education, 54*(1), 126-147.

Ohio Department of Education (n.d.). Kindergarten Reading Assessment: Fall 2018 Administration. Retrieved July 1, 2021 at http://education.ohio.gov/getattachment/Topics/Early-Learning/Kindergarten/Ohios-Kindergarten-Readiness-Assessment/KRA-Annual-Report-2018-2019-1.pdf.aspx?lang=en-US

Piasta, S.B., Justice, L.M., McGinty, A..S, & Kaderavek, J.N. (2012). Increasing young children's contact with print during shared reading: longitudinal effects on literacy achievement. Child Dev. 2012 May-Jun;83(3):810-20. doi: 10.1111/j.1467-8624.2012.01754.x. Epub 2012 Apr 17. PMID: 22506889.

Ridzi, F., Sylvia, M. R., & Singh, S. (2014). The Imagination Library Program: Increasing parental reading through book distribution. *Reading Psychology.* doi: 10.1080/02702711.2013.790324

Rikin, S., Glatt, K., Simpson, P., Cao, Y., Anene-Maidoh, O., & Willis, E. (2015). Factors associated with increased reading frequency in children exposed to reach out and read. *Academic pediatrics, 15*(6), 651-657.

Sawyer, B. E., Justice, L. M., Guo, Y., Logan, J. A., Petrill, S. A., Glenn-Applegate, K., . . . Pentimonti, J. M. (2014). Relations among home literacy environment, child characteristics and print knowledge for preschool children with language impairment. *Journal of Research in Reading, 37*(1), 65-83.

Sharif, I., Rieber, S., Ozuah, P. O., & Reiber, S. (2002). Exposure to Reach Out and Read and vocabulary outcomes in inner city preschoolers. *Journal of the National Medical Association, 94*(3), 171.

Szumlas, G.A., Petronio, P., Mitchell, M.J., Johnson, A.J., Henry, T.R., DeWitt, T.G. (2021). A Combined Reach Out and Read and Imagination Library Program on Kindergarten Readiness. P*ediatrics.* 147(6):e2020027581

Thompson, A.M., Klemp, H., & Stinson, A.E. (2016). Effect of the imagination library on caregiver–child literacy interactions and school readiness: findings from two quasi-experimental propensity score studies, *Journal of Children and Poverty*, DOI: 10.1080/10796126.2016.1187587

Weitzman, C. C., Roy, L., Walls, T., & Tomlin, R. (2004). More evidence for reach out and read: a home-based study. *Pediatrics, 113*(5), 1248-1253.