

## The Hatchlings Project: Community-Library Partnerships to Reduce Childhood Literacy Inequities

The Maryland Initiative for Literacy and Equity (MILE) at the University of Maryland (UMD), in partnership with Maryland State Library Agency (MSLA) and multiple community partners, is requesting \$249,999 to adapt and evaluate a sustainable, asset-based program to empower underserved new parents to engage their babies in early language and literacy building activities both in and out of the library. This project will leverage the collective, cross-disciplinary expertise of librarians, researchers, educators, neuroscientists, speech language pathologists, and other partners to establish an *open-access, flexible, and scalable national model* for supporting the foundations of language and literacy development in young children (NLG Aim 1). The ultimate goal is to reduce socioeconomic and racial/ethnic disparities in literacy and academic outcomes through a culturally responsive prevention model.

**Project Justification:** The U.S. has experienced [persistent inequities](#) in literacy and academic success across socioeconomic status (SES), racial, ethnic, and native language identities. While research suggests that intervention programs implemented in infancy and early childhood can [reduce learning-related disparities](#), these programs often don't reach families early enough to *prevent* disparities during critical periods of brain development. In this vein, one of the most effective ways to improve language and literacy development is by increasing the capacity of parents and caregivers to support their children's learning *from birth and before*. Nationwide, libraries are ideally situated as a powerful and influential community resource for supporting under-resourced parents in becoming their child's first and most important teacher, to help plant the seeds of early language and literacy development. This commitment is evidenced in multiple [recent IMLS](#) awards. To maximize the impact of early learning programs, we must build on this evidence by developing scalable, *culturally responsive programming* and establishing a *strong research base of efficacy*. This project addresses those aims through a cross-disciplinary approach drawing from information science, speech language pathology (SLP), education, and neuroscience to improve, evaluate, and disseminate a maximally impactful early learning program.

[Hatchlings](#) is an innovative, collaborative program designed by librarians and early literacy experts as a newborn component of the [Mother Goose on the Loose](#) (MGOL) program, which aims to build children's early cognitive, physical, and socioemotional learning through principles of ritual, repetition, music, movement, and joyful interactive play. Hatchlings includes curricula for new parents ("Ready to Hatch", 1 session before birth, and "In the Nest", 4 weekly sessions for 0-4 months), co-taught by librarians and allied community partners such as family resource centers, health departments, cultural community organizations, and Title 1 schools. Over the last three years, Hatchlings has been piloted at 23 library sites across the state of Maryland, reaching 127 families from diverse socioeconomic, cultural and geographical backgrounds. In evaluations ([Ready to Hatch](#), [In the Nest](#)), parent [testimonials](#) were exceedingly positive, with 100% of respondents reporting that they gained skills to support their children's early learning and plan to make greater use of library programs/materials for their child. Despite this success, several needs have arisen to make this a scalable, sustainable, and maximally impactful program at the national level.

First, while the program is strengths-based and empowering, it is not fully adapted in a way that makes it culturally responsive to all the demographics it aims to serve. Thus, the **first goal** of this project is to [culturally adapt](#) the curriculum through asset-based co-design with target communities, and develop a flexible, culturally responsive, and scalable version of the curriculum. This open-access resource will utilize and disseminate a train-the-trainer model that will be implemented by libraries and community partners across the U.S. As the [fourth most diverse state in the country](#), with 37% of Kindergartners living in poverty (only [29% of whom demonstrate Kindergarten readiness](#)), Maryland is a microcosm of the nation, and thus an ideal location to implement this process. Second, while positive testimonials are promising, evidence-based interventions (EBIs) require objective measures of impact across time. Thus, the **second goal** of this project is to systematically evaluate Hatchlings' effects on parents' self-efficacy for building their child's foundation of language and literacy skills, the naturalistic home language environment, and family library use. Together, these goals directly address NLG aim 1 objective 1, to build the workforce and institutional capacity for serving the information and education needs of the public by enhancing, evaluating, and sharing a replicable library program that supports children's early learning as well as under-resourced parents' self-efficacy to drive that learning.

**Project Work Plan:** This 3-year proposed project will follow the principles of community based participatory research (CBPR). In **Year 1**, the project team will engage in a [4-step cultural adaptation process](#) to gather community feedback, create a preliminary adaptation(s), get community feedback on the adaptation(s), and refine the adaptation. First, a team of SLPs, librarians, and educators will conduct focus groups with (1) families who participated in previous implementations of the Hatchlings curriculum who identify as low-income and/or racial/ethnic/linguistic minorities, to understand their perceptions and requests, (2) libraries who hosted pilot implementations and a few who declined hosting initial pilots, to understand needs and barriers to successful programming, (3) community partners (e.g., family resource centers, health departments, cultural community organizations, etc.) who either co-facilitated prior implementations or are interested in future facilitations, to better understand the demographics and needs of the populations they serve. Focus

groups will intentionally recruit participants from across Maryland to best represent the sociocultural and geographic breadth of the state. Then, in collaboration with participants, we will refine the initial Hatchlings curriculum to integrate culturally responsive pedagogy. This will yield a flexible, scalable curriculum and accompanying materials (e.g., website, YouTube channel, giveaways) that will be open-access (license CC BY-NC-ND 4.0) and disseminated for implementation across the U.S. In **Year 2**, the team will train library facilitators (train-the-trainer) and implement the program at 10 libraries/community partner locations across Maryland, specifically targeting locations with high proportions of minority and low-resource populations and sites that experienced barriers to participation in earlier pilots. Simultaneously, we will collect quantitative and qualitative data from libraries and community partners on the program's feasibility, sustainability, scalability, and reach of the target demographics. We will also collect several pre-intervention (baseline) and immediate post-intervention outcome measures of program impact on families. This will include (1) naturalistic audio recordings of the infant's home language environment using [LENA technology](#), to evaluate whether the program results in increased language and turn-taking stimulation, and (2) quantitative measures of parents' perceived self-efficacy (PSE) to support their children's early learning, to evaluate whether the program increases parents' PSE. In **Year 3**, we will conduct a follow-up evaluation of these families at 4-months post to assess continued use of the materials/skills from the program, additional change in the home language environment, and how frequently and in what ways the family used library resources. Aligned with CBPR, participants will be invited to co-interpret the findings and conclusions. We will then disseminate the curriculum to multidisciplinary practitioners (librarians, SLPs, community agencies, etc.) for widespread, scalable implementation. To manage progress toward milestones, the project team will hold regularly scheduled team meetings to review, document, track progress, and coordinate close feedback with community partners.

**Results and Impact.** This project will meet a national, persistent need to reduce socioeconomic and racial/ethnic disparities in literacy and academic outcomes by engaging new/expectant parents and caregivers to learn about, co-create, use, and customize early language resources to promote their children's literacy development. Project outcomes include: (1) an open access, widely available framework of asset-based co-design plans that guide librarians and literacy practitioners to engage in similar community-focused cultural adaptations of the Hatchlings curricula, customized for their local parent/family communities; (2) a community of trained mentors that can guide library and community staff to expand culturally responsive early literacy programs across public libraries and community centers in a train-the-trainer format; (3) formal, systematic means for assessing and documenting the program's efficacy and reach; and (4) program dissemination through webinars and at regional/national professional conferences and venues, such as the Public Library Association (PLA) division of ALA, the Chief Officers of State Library Agencies (COSLA), and similar organizations for allied professionals. Library preparation programs can also integrate these deliverables into their curricula.

**Project Team:** This project involves a cross-disciplinary collaboration of researchers, educators, librarians, and community partners with varied expertise. [Rachel Romeo, PhD, CCC-SLP \(PI\)](#), Assistant Professor of Education, is an expert on early brain development, language/literacy development, and inequities in learning and development, and will oversee all aspects of the project and research outcomes. [José Ortiz, PhD, CCC-SLP \(Co-PI\)](#), Assistant Professor of Hearing & Speech Sciences, is an expert on bilingual language development, identification of language/literacy disorders in children from culturally and linguistically diverse backgrounds, and intervention for communication disorders in early childhood, and will lead the cultural adaptation process. [Beth Bonsignore, EdM, PhD \(Co-PI\)](#), Assistant Research Professor of Information Studies, is an expert in asset-based co-design with youth and families, has conducted research in new media literacies with youth services librarians, and will support community outreach and co-design processes. [Carrie Sanders, MLS \(Co-I\)](#), Youth Services Coordinator for the Maryland State Library Agency (MSLA), spearheaded the initial Hatchlings pilots, and will provide training, supervision, and consultation regarding the Hatchlings curriculum for the participating library/community partner locations. [Betsy Diamant-Cohen, MLS, DCD \(Consultant\)](#) developed the original Hatchlings and award-winning Mother Goose on the Loose curricula and has advised on similar IMLS projects; she will consult on the adapted curricula and train the program trainers. Various community partners will collaborate on focus groups, referring families, and co-facilitating the curriculum. Finally, a multi-state advisory board will be formed from 6 states who have already expressed interest in implementing Hatchlings.

**Diversity Plan:** This project integrates diversity, equity, and inclusion through its goals, methods, participants/partners, and research/implementation team. As a multi-racial, multi-ethnic, multi-SES research team, we are committed to recruiting participants (focus groups and program recipients) from diverse racial, ethnic, linguistic, socioeconomic, and geographic (urban/rural) backgrounds. The approach is centered in CBPR co-design principles, and employs an asset-based, culturally responsive curriculum to support underserved families and communities.

**Budget Summary:** We are requesting a total of \$249,999 for this project. This includes Salaries and Wages (\$74,600); Fringe Benefits (\$14,271); Travel (\$3,000); Supplies, Materials, and Equipment (\$19,385); Contracts (\$10,000); Other Direct Costs (\$39,000) which includes participant support and funds for focus groups and recruitment; and (8) Indirect Costs (\$89,743) at UMD's federally negotiated rate of 56%.