

## **Connecting Families to Libraries with Text Messages for Early Learning**

### **ABSTRACT**

The Ypsilanti District Library (YDL) requests a \$242,640 National Leadership Lifelong Learning Grant to scale TALK: Text and Learn for Kindergarten, an early literacy text messaging service developed and piloted from 2017-2020 in Washtenaw County, Michigan with LSTA funding. Support from IMLS will allow YDL to develop and evaluate a scalable model that would enable other libraries to reach families with this tool for increasing parent engagement and early learning.

Singing, reading, talking, and playing with young children every day from birth has a proven impact on brain development, but many parents are unaware these daily interactions can prepare their child for school success. To meet parents where they are, YDL led libraries in Washtenaw County in the development of TALK to empower parents with simple activities that can be incorporated into everyday routines. Our text messaging service sends parents two messages each week that suggest age-appropriate activities based on Every Child Ready to Read 2.0 (ECRR) that build early learning skills, with the goal of raising the frequency and quality of parent/child interactions, and several messages each month about free local family-friendly events. Bold, colorful graphics were designed to inspire parents to sign up when they see posters, bus ads, or billboards, and strong partnerships with schools, pediatricians, law enforcement, and organizations serving low-income parents, allowed TALK to reach under-resourced families in both urban and rural areas. After successfully implementing the service with libraries in Washtenaw County, YDL is ready to scale the project to all libraries in Michigan, then Indiana, and finally plan for sharing the service nationally.

As we move forward, our goals are to reach more parents by translating the messages into Spanish; to provide Michigan libraries with the ability to connect to underserved parents; to develop and test TALK toolkits and professional development resources that any library, state library, or national library organization can use to implement TALK successfully; and to help other libraries reach under-resourced families by forming successful partnerships with pediatricians, schools, and other key early learning advocates in their communities. Work toward these goals will take place in three phases.

*Phase 1:* The Midwest Collaborative for Library Services (MCLS) will develop the technology platform needed to deliver the messages to more families and build a Web interface libraries can use to schedule custom text messages about local library programs and services. MCLS will help create training webinars so that professional development will be available to libraries in remote areas, and they will contract with Western Michigan University graduate students in Spanish to translate the messages into Spanish. YDL will assemble materials for toolkits to support the rollout in new communities.

*Phase 2:* Library of Michigan (LM), the state library agency that supports and serves public, academic, and school libraries, will promote the service to 395 Michigan public libraries. Libraries that opt in will receive professional development opportunities, a TALK Publicity Toolkit, and a Building Successful Partnerships Toolkit to guide successful implementation of the service in their communities. A research team from HighScope's Center for Early Education Research and Evaluation Department (HighScope), which has over 50 years of experience in early education research and evaluation, will conduct an ongoing evaluation of the expansion of the service and the impact TALK has on increasing and improving parent/child interactions throughout the state. Adjustments will be made to tools and procedures based on evaluation findings.

*Phase 3:* MCLS will develop a plan with the Indiana State Library (ISL) to expand the service to libraries in Indiana based on the evaluation of the project in Michigan and create an open source toolkit other libraries can use to replicate TALK. Because the Association for Library Service to Children (ALSC) supports the program, which is aligned with their ECRR curriculum, we will discuss expansion plans with ALSC and work to ensure all resources for a successful rollout by any library in the U.S. are ready to share more broadly by the end of year three. We anticipate the final result will be a complete package that can be used by any of the 6,000 libraries using ECRR, either through MCLS or using the open source toolkit.

## STATEMENT OF NEED

### The Importance of Early Learning and Parents as Teachers

The research is clear: building pre-literacy, math, science, and social-emotional skills before age 5 prepares young children to be successful in school and in life ([Williams & Lerner, 2019](#)). Early parent/child interactions that include talking, reading, singing, and playing are the most effective way to build the brain's neural connections ([Zero to Three](#)), and increase vocabulary and reasoning skills necessary for kindergarten readiness. Through these daily interactions, parents become their child's first and best teachers. However, parents' knowledge about the importance of early engagement varies based on income, creating lifelong divisions. Low-income children are six months behind their peers in language development by age two ([Fernald, Marchman, & Weisleder, 2013](#)). These children are more likely to start kindergarten at a disadvantage and remain behind in third grade, when "learning to read" changes to "reading to learn," and low literacy then impacts all subjects. Parents engaging in "cognitively enriching activities with their children" improves achievement among low-income children and contributes to a modest narrowing of the school readiness gap ([Reardon & Portilla, 2016](#)).

### Other Parent Educational Text Messaging Services, and TALK Development and Evaluation

Text messages about early literacy have proven to be successful at increasing the number of activities parents engage in with their children ([Revelle, Reardon, Green, Betancourt, & Kotler, 2007](#)). Text messages succeed because information is provided in small, easy-to-read chunks, accessible to parents who may feel overwhelmed by factors beyond child rearing. They also serve as reminders; low-income children whose parents were regularly reminded about early literacy via text message increased their positive parent/child interactions in as little as one year (York and Loeb, 2014). Research also showed that Head Start parents in a study using Parent University text messages engaged in more learning activities at home than the control group ([Hurwitz, Lauricella, Hanson, Raden, and Wartella, 2015](#)). Those interactions have in turn been shown to improve school readiness and reduce the achievement gap ([Reardon & Portilla, 2016](#)). Improving early childhood outcomes and kindergarten readiness has been widely recognized as having societal impacts that stretch well beyond a child's school years. In the long term, students who are chronically behind in school are more likely to drop out, have limited career options, earn less, and repeat the cycle of poverty. Economist James Heckman analyzed early childhood programs including the Perry Preschool Project—conducted in Washtenaw County—and found that investments in early literacy yielded a 13% return on investment per year based on increased school and career achievement and reduced spending on remedial education, health, and criminal justice ([Garcia, Heckman, Leaf, & Prados, 2016](#)). Heckman concludes that, "The highest rate of return in early childhood development comes from investing as early as possible, from birth through age five, in disadvantaged families." These conclusions point to services like TALK having broad, long-term, and even multi-generational economic impacts in communities where they are deployed, particularly if they are successful at reaching and engaging low-income parents in their children's earliest years.

Libraries have traditionally used storytime as the primary method for supporting parents in their roles as early teachers, but low-income parents are more likely to work longer hours, making it difficult to attend educational programs with their young children, even when those programs are free, and less likely to have transportation to get to the library ([Lopez and Caspe, 2014](#)). The idea to develop TALK to share early literacy tips with parents who did not come to the library was initially conceived after seeing a text message service offered by The Brooklyn Public Library, which sent a weekly literacy-building activity to parents. Before developing TALK, YDL extensively reviewed other parent text messaging services and the associated research.

Ready4K, a service developed at Stanford University, showed strong evidence that a parent message service can increase parental involvement in their young child's education ([York & Loeb, 2014](#)). [Ready4K](#) sent parents with children ages 3-5 a set of three sequential messages each week, offering a fact, tip, and extension activity. [Bright By Text](#), developed by the Colorado Department of Education to reach parents with children ages 0-3, successfully used links within text messages to provide extended information to parents such as detailed instructions, a video, or research. The 2012 IMLS-funded [Text2Learn](#) project, a 12 week pilot study by the Minnesota Children's Museum,

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Hennepin County Library, and Ramsey County Public Library, sent activities and community events via text message and found that: low-income parents from ethnically diverse backgrounds were willing to sign up to receive text messages; parents thought the messages were helpful and engaged in more literacy activities; and messages allowed organizations to extend their reach. Parents in the Text2Learn pilot felt 2-3 messages per week was the right quantity, and they preferred activity ideas rather than general information. Other organizations YDL reviewed that used text messages to educate parents included Text4Baby that sent health messages to parents of newborns to share information about a baby's development and reminders about car seats, nursing, and well child visits. The City of Springfield Massachusetts used text messages to share community events, including library programs, with families. YDL also reviewed how other small to medium sized libraries were using a platform called Remind to send weekly messages to parents.

We wanted to take the best of what research based services offer users, but align it to libraries' storytime curriculum to provide consistent messaging to parents; reach parents who might not be aware of library programs to know what the library has to support families with little ones; and integrate our messages throughout the community to reach parents anywhere. Thorough investigation of research and other text messaging services helped us develop a successful service that is unique and well-suited for use by libraries. TALK messages were created by library staff at urban and rural libraries in our county, and content aligns with the Every Child Ready to Read 2.0 practices libraries promote in storytimes and when partnering with preschools to encourage parents to help their young children build school-readiness skills, making it easy to use as an expansion of storytime as well as a standalone service. Parents receive two messages per week for up to two children, and all messages begin with one of the five ECRR practices--sing, talk, read, write, play--so even if a parent doesn't fully open the message, they are reminded to positively interact with their child. 11% of TALK users reported upon signing up for TALK that they did not use the library, so messages inform non-users of library services, allowing libraries to expand their reach to parents who may not be able to attend storytime, and supplements at-home learning activity suggestions with free community and library events parents may be able to attend outside of regular storytime hours that increase positive parent/child interactions. Most texts are SMS and contain a description of the activity suggestion with some links to the TALK website for additional information. Occasional MMS messages with images that illustrate storytime fingerplays are also included. Parents without access to a smartphone receive an alternate SMS message.

TALK messages were reviewed by an adult literacy organization to ensure they were accessible to adults with low literacy skills and English Language Learners. Activities don't take a lot of extra time for busy parents, can be incorporated into everyday routines such as doing laundry, eating a meal, or grocery shopping, and span a wide range of content areas. Focus groups held in year one with diverse groups of parents from Head Start and Success by Six Great Start Collaborative helped ensure messages were culturally appropriate and only required supplies commonly available at home. We learned parents will adapt the messages to different situations once an idea is shared and they are willing to search for songs online if they don't know a suggested tune.

We initially focused on literacy and used a child's birth date to divide children into three broad age categories: baby, toddler, and preschooler. The evaluation at the end of year one of our pilot study revealed that parents wanted a wider range of activity suggestions that were more closely aligned to their child's development. In year two, we tailored the content of messages to a child's development level to maximize learning. Curriculum experts at HighScope reviewed content for developmental appropriateness and helped align it to recommended learning outcomes. During year two, through a focus group and interviews, we learned parents enjoy receiving event notifications, so we increased links to events and currently send 2-3 messages per month about events, in addition to two messages per week with activities parents can do at home. This level of research and content review during the pilot study ensured the current set of 640 text messages that span a child's development from birth to age 6 across content areas is of high quality and accessible to a wide audience.

While marketing TALK during the pilot phase, we found the messages are compelling educational pieces on their own, which spurred an outreach campaign that won a 2019 John Cotton Dana award. Publicity followed the Talking

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Is Teaching model, placing “in situ” activity suggestions throughout the community. For example, a suggestion to talk about what you see out the window was advertised inside city buses, a nursery rhyme was placed near changing tables in local businesses, and an “I Spy” activity was posted in pediatrician waiting rooms. Businesses, schools, and pediatricians were enthusiastic about sharing these materials, positioning themselves as early literacy partners and the library as a community literacy leader. Promotional materials and sample community reports are already complete and ready to share with other libraries. By sharing TALK with their communities, libraries will have a new way to reach families while sharing a valuable early literacy service that the entire community can rally around.

### Scaling to Reach More Parents

TALK currently reaches 1,100 children in Washtenaw County. TALK was aggressively evaluated and modified throughout the three-year development and pilot study, with parents completing short quarterly surveys, phone interviews, and focus groups. Parents expressed increased confidence that the daily interactions were helping their children learn. Library events promoted through the service produced a marked improvement in attendance. The evaluation at the end of year two of our pilot study showed an overall satisfaction rate of 8.28 on a scale of 1 to 10, with 10 being the most satisfied. 80% of parents interviewed said they completed more than half of the activities. The TALK messaging service has been shown to be valuable and is ready to share with other libraries.

As TALK enters the scaling phase, the service will be able to serve users inexpensively, for about \$1.80 per child per year, with the cost decreasing as more users enroll. In phase one of this scaling project, the technology platform that delivers messages to parents will be redeveloped to accommodate more users. We will prepare toolkits for libraries to successfully implement TALK in any community and test the rollout in the Battle Creek region of Michigan with the support of Willard Library. In phase two, all parents and caregivers of young children in Michigan will be able to sign up for the service, and libraries who choose to actively promote TALK in their communities will have access to the toolkits and trainings before a state-wide launch. We anticipate 50% of Michigan libraries to sign up to promote TALK, and messages to reach parents of 10% of children ages 0-5 in those communities totaling about 28,463 children by the end of the grant period. In phase three, ISL will help develop a plan to expand to Indiana. MCLS will develop a tiered consortial subscription model for the continuation of the service, and produce documentation so other libraries can roll out the service. YDL will initiate conversations with ALSC to inform other libraries using ECRR about TALK. Scaling TALK will include ongoing evaluation and refinement at each stage.

### Lifelong Learning Alignment

This project will develop a platform for message distribution and toolkits for successful implementation that allow libraries to increase early learning and parent involvement in their communities. The effectiveness of toolkits and implementation of TALK will be evaluated at the regional and state levels before continuing to expand. TALK incorporates existing research and text messaging programs, but is unique because it promotes library services to new audiences and helps libraries build strong partnerships and lead the way in their communities as early literacy advocates. The alignment of TALK to the nationally-used ECRR curriculum allows easy integration with youth services and reaches non-library users and under-served families.

## **PROJECT DESIGN**

### Goals

		Activities	Results
<b>Goal 1</b>	To increase the frequency of skill-building interactions between parents or caregivers and children ages 0-5 in Michigan and Indiana, by	Translate existing text messages into Spanish	Database of fully evaluated text messages in English and Spanish that

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	providing accessible activity suggestions based on Every Child Ready to Read 2.0 in English and Spanish	Evaluate and refine text messages in partnership with HighScope	can be shared with other libraries
<b>Goal 2</b>	To provide libraries in Michigan and Indiana the ability to use text messaging to connect parents in their service areas with free resources and events that promote early learning at the library	Build and test a text message distribution platform that allows individual libraries to send messages to users within their service areas	Fully functional text messaging platform for the delivery of TALK texts and customized library texts
		Create a user guide for the text messaging platform	Twilio user guide for libraries
<b>Goal 3</b>	To offer a toolkit of high quality resources and professional development materials that any library, state library, or national library organization can use to implement TALK at an affordable rate in communities throughout the US	Assemble a customizable TALK Publicity Toolkit consisting of templates for flyers, posters, bus ads, and billboards	Shareable publicity materials which libraries can customize to meet their needs
		Develop professional development webinars with MCLS	Instructional online webinars to encourage libraries to use TALK and implement it successfully
<b>Goal 4</b>	To expand libraries' capacity to reach underserved families by sharing an effective model for building partnerships with pediatricians, law enforcement agencies, schools, WIC, and other key early learning advocates in their communities	Assemble a Building Successful Partnerships Toolkit with MOU templates, report templates, and PowerPoint for library staff to use with schools and community organizations	Shareable resources available through the Library of Michigan and MCLS
		Convene a meeting of local advisors to discuss sharing information about TALK with their organizations' state and national offices	Expanded partnerships that libraries can rely on when reaching out to organizations at the local level

Key Activities

**Phase 1: Preparing to Scale State-wide**

Develop New Text Message Distribution System

While all TALK content has been developed and evaluated, YDL currently contracts with Trumpia, a mass marketing company, to send the messages. Using Trumpia's platform, we developed a series of "auto-campaigns" that use a child's birthdate to send a message that aligns to the average child's likely zone of proximal development. Trumpia is not a viable option for expanding TALK for use by more libraries. In addition, we were using a shared

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[short code](#) that was deactivated this year when carriers blocked messages from shared codes due to spam abuse. Using [Twilio](#), a messaging platform more commonly used by nonprofits, MCLS technology specialists will develop a small proof-of-concept application using the Twilio platform and a new dedicated short code, and a pilot test will be conducted in Washtenaw County with current users in late 2020 to ensure functionality. MCLS will then work with YDL to design a full-featured, open source Web application that will distribute the messages. In addition to sending messages based on a child's birthdate to users, MCLS will develop a Web interface for libraries to use so they can configure event messages for TALK, with backend functionality that will be housed at MCLS to get event message information from libraries into Twilio. MCLS will develop and maintain a backend database to store necessary information for the operation of the project and implement a Web application on a cloud-based server.

### Assemble Curated Resources

- *Twilio User Guide for Libraries*: MCLS will create a user guide for libraries to schedule customized messages for their service areas using the Web interface.
- *TALK Publicity Toolkit*: YDL will assemble a promotional toolkit from materials designed during the pilot study that includes customizable flyers, posters, bus ads, Instagram and Facebook ads, and billboard templates that will be updated with a new short code and made available to Michigan libraries through LM to promote TALK.
- *Building Successful Partnerships Toolkit*: YDL will convene a meeting with advisors that includes organizations, schools, and parents to help develop this toolkit. TALK was successful due to strong partnerships with daycares, preschools, schools, county-wide school administrations, service agencies, pediatricians, and the sheriff's office, who all helped ensure the service reached under-resourced families. The toolkit will include a PowerPoint presentation, sign up forms, progress report templates, and MOU templates to help libraries establish and sustain partnerships and train on-the-ground supporters who directly work with parents. This toolkit will be available through the LM.
- *Webinars*: YDL will work with MCLS to create two webinars that LM will share with libraries, one to share the research and benefits of TALK to encourage libraries to sign up to implement TALK in their communities, and one to educate librarians and library administrators on how to successfully implement TALK using the toolkits.

### Pilot and Evaluation

- In February 2021, LM will provide communication channels and training opportunities for the Michigan library community and the public, beginning with the Calhoun County region of Michigan (Battle Creek), a comparable library to YDL that we developed a relationship with during our strategic planning phase based on similar community size and demographics, as a test before rolling out statewide.
- HighScope will evaluate the effectiveness of the rollout to help improve the process.

### Extend Partnerships to the State and National Level

- LM will work with the Michigan Secretary of State's office to get digital announcements in waiting areas throughout Michigan.
- YDL will work with local organizations to expand partnerships developed in Washtenaw County to the national level including Success by 6, Reach Out and Read of the University of Michigan, and the Women, Infants, and Children Program to make it easier for other libraries to form local partnerships working with our advisors.
- HighScope curriculum specialists will continue to review and improve content based on evaluation findings and will encourage Head Starts and other preschools using their curriculum nationwide to promote TALK to parents.
- LM will work with the Michigan Department of Education to develop a plan to introduce TALK to school districts throughout Michigan.
- YDL and LM will work with the Indiana State Library (ISL) to ensure the rollout being tested in Michigan also aligns with the way ISL works with public libraries.

## ***Phase 2: Expanding TALK to Other Regions in Michigan***

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- In May-August 2021, LM will use their capacity to arrange and promote library staff training related to the project and deliver materials to participating libraries. Training opportunities for library staff will take the form of in-person workshops scheduled by LM in each of the eleven regional library cooperatives and webinars developed with the support of MCLS. Instruction will include best practices for building community partnerships around TALK and a toolkit of resources including customizable promotional materials and templates for reporting the program's local successes to the community. Libraries that choose to actively promote TALK will receive an MCLS TALK account and user guide that will allow them to schedule event messages.
- Beginning in September 2021, TALK will launch state-wide. All Michigan residents will be able to sign up for TALK. To reduce barriers to access, parents who sign up for TALK are only asked for three pieces of information: the phone number they want to use to receive texts, their child or children's birth dates so they receive content appropriate for their child's development, and a zip code so they can receive notifications of family events near their home if their library is offering the service in their community. Users will receive 8-9 activity suggestions per month and 2-3 event messages per month. Most messages contain only texts or links to the TALK website and will cost about \$0.01/message depending on the user's carrier. About 4 times each year users receive an MMS message that contains a photo with more information, such as the hand motions and lyrics to a fingerplay. MMS messages cost about \$0.02/message. We anticipate half of Michigan libraries will enlist to promote TALK and we will reach 5% of children in those communities, totaling 14,231 Michigan children by the end of year two.
- YDL will present at the Michigan Library Association Spring Youth Services meeting to share information with other libraries about the opportunity to use TALK in their communities.
- HighScope will evaluate the effectiveness of the statewide rollout to continue to improve the program.

### ***Phase 3: Developing a Plan to Move Beyond Michigan***

- YDL and the LM will continue to provide training and toolkits to Michigan libraries. Based on the pilot program, we anticipate the number of users to increase and we will reach 28,463 children, 10% of Michigan children in communities where libraries are actively promoting the service by the end of year three.
- MCLS and LM will help ISL to develop a model to serve libraries in Indiana.
- YDL will present at the Indiana Library Federation state conference in 2022 to share the opportunity with other libraries.
- YDL will initiate conversations with ALSC to see how TALK can be shared with libraries beyond Michigan and Indiana, and will present at the American Library Association 2023 national meeting.
- MCLS will develop a tiered consortial subscription model for libraries to continue to use TALK after the grant period that will include the cost of sending messages through Twilio, as well as associated staffing costs to monitor the server and provide accounting services to collect subscription fees from libraries; and documentation so other libraries can use the messages, open source code, and the toolkits to build a coalition of early learning partners in their community and positively impact school readiness and student outcomes with the help of TALK.

### **Assumptions**

As trusted institutions, libraries can take the lead to build collaborations between community partners interested in early learning and improving school readiness and educational outcomes for low income families. Libraries are broadly available in most communities in the state and nation.

### **Potential Risks**

Our greatest risk is running out of funds to send messages to all parents who sign up for the service for the duration of the grant. When we gave a presentation about TALK at the Michigan Library Association Annual Conference in October 2019, all 55 librarians in attendance were interested in bringing TALK to their communities. Ideally, we will be able to provide the service to Michigan libraries at no cost for two years and offer the service to Indiana libraries at a low cost during year three. To mitigate the risk of running out of funds, MCLS will carefully monitor enrollment and

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costs associated with Twilio, and use data from the evaluation to develop a tiered subscription model for TALK based on the size of library service populations beginning in year three if necessary.

Another risk is that due to the push to close the achievement and school readiness gaps, other products are trying to meet the need for increasing and improving early parent/child interactions to improve low-income children's school readiness. We run the risk of overlapping services in the Detroit area where Ready4K operates on a classroom model and encourages preschool teachers to promote the service at the classroom level, and BrightByText is working in partnership with Detroit PBS. To mitigate the potential of offering a competing services, we will start the rollout in other under-resourced areas of the state such as Battle Creek, Flint, and remote rural areas in the Upper Peninsula in the hopes that we build strong programs and buy-in from other libraries who will share their successes and encourage Detroit Metropolitan Area libraries to use TALK. Reaching all parents regardless of their location, providing libraries an opportunity to reach more families and connect them to free resources, and the potential to expand this service nationwide make the potential to serve more people worth the risk of overlapping with a similar service in a limited geographical region of one state.

A third risk is the possibility of difficulty with the technology vendor, similar to what we experienced with our current vendor, Trumpia. We anticipate our partnership with experts at MCLS who frequently work with technology vendors will mitigate this potential risk.

### Audiences

Our primary audience at the scaling phase of our project is libraries. We want libraries to successfully implement TALK and use our toolkits to reach parents where they are. However, we realize that libraries are all different sizes, with different levels of staffing, different priorities, and different amounts of funding. Some libraries will be able to implement TALK using all the provided resources, where others may only use flyers and a small amount of outreach. During our pilot study in Washtenaw County, we found that TALK will reach some parents in every community, regardless of a library's implementation efforts. Our secondary audience is under-resourced parents who will learn new methods that are quick and part of daily routines to improve their young children's future academic success.

### Evaluation

HighScope will gather information from libraries and participants to monitor the progress of the project, to use the information to make mid-course adjustments to ensure the success of the project, to measure how well the goals of the project were accomplished, and to determine the impact on the identified need, getting kids ready for kindergarten. We will collect both qualitative and quantitative data in an effort to monitor and guide the project, as well as to clearly illustrate goal accomplishments and the impact of the project in changing parent behavior and getting children ready for kindergarten. This project includes an evaluation component during each project phase. HighScope will evaluate five major components of the project: the usability of the technology platform and web interface, the effectiveness of the training webinars, professional development activities, Publicity Toolkit, and Building Successful Partnerships Toolkit, the reach of the expansion of services, the impact TALK has on increasing and improving parent/child interactions, and the development of a plan to expand the services to libraries in Indiana.

The method of evaluation for each component is outlined below:

<b>Component</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Usability of the technology platform and web interface	Usability surveys after the development and after any revisions	Usability survey with greater number of users	



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Effectiveness of the training webinars, professional development activities, Publicity Toolkit, and Building Successful Partnerships Toolkit	Post-training satisfaction surveys	Post-training satisfaction surveys	Post-training satisfaction surveys
	Staff survey of project team	Staff survey of project team	Staff survey of project team
Reach of expansion of services	Program staff surveys about numbers served	Program staff surveys about numbers served	Program staff surveys about numbers served
Impact TALK has on increasing and improving parent/child interactions	TALK participant surveys about use of the texts with children	TALK participant surveys about use of the texts with children	TALK participant surveys about use of the texts with children
Development of plan to expand services in Indiana			Program staff survey about plan and survey of plan artifacts (review of actual plan for completeness)

Advisors

- Jeffrey A. Beal, Senior Research Scientist, HighScope
- Jill Claxton, Research Associate, HighScope
- Kara Cleveland, Professional Development Office Supervisor, Indiana State Library
- Kimberly Diamond-Berry, Director Early Childhood Applied Practice, HighScope
- Tynisha Dungey, Youth Services Manager, Willard Public Library, Battle Creek, Michigan
- Scott Garrison, Executive Director, Midwest Collaborative for Library Services
- Tessa Genovese, Systems Administrator, Midwest Collaborative for Library Services
- Julia Lumeng, Lead Physician and Founder, Reach Out and Read of University of Michigan
- Shannon Lockhart, Early Childhood Applied Practice Manager, HighScope
- Margy Long, Director, Washtenaw County Success by 6
- Jennifer Musser, Learning is a Family Thing Program Coordinator, Washtenaw Literacy
- Pablo Pastrana Perez, Associate Professor of Spanish, Western Michigan University
- Karren Reish, Library Grants Coordinator, Library of Michigan
- Jake Speer, Director, Indiana State Library
- Shannon White, Library Development Manager, Library of Michigan
- Trusted Parent Advisors from Washtenaw County Success by 6, Great Start Collaborative

**DIVERSITY PLAN**

Michigan Read by Grade Three law was passed in 2016 and took effect in 2019. Any child who is not proficient in reading based on state assessments, or who is at-risk of reading failure, can be held back in third grade. Our community was concerned because the public schools consistently rank in the lowest 3% of Michigan public schools on state assessments. All organizations serving low-income families and children were brainstorming ways to help parents with young children be ready to read on grade level by third grade, and TALK was designed with the intention of reaching under-resourced parents whose children were most likely to be impacted by the new retention law. Children of color are less likely to be proficient in reading. 82% of black children in our district are not proficient compared to 68% of white children.

The five libraries that initially launched TALK include a diverse urban community where many families live in poverty, as well as several small rural libraries whose users span the income spectrum. The pilot was successful at

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reaching low-income and minority parents, who are often underrepresented at the library. 21% of current users are African American, compared to 13% of the Washtenaw County population, and 40% of users have an annual household income of less than \$40,000, while the county's median household income is \$65,618. Because state-wide 80% of black children and 67% of Latino children are not proficient in reading by third grade, a service like TALK that has been shown to be successful reaching under-resourced and/or parents of color is an important potential resource for Michigan communities.

Digital technology has been shown to be an effective way to help bridge the divide, teaching all parents how to build their child's school-readiness skills (Lopez and Caspe, 2014). Text messages are especially effective at reaching a broad audience. Pew Research Center found that 96% of Americans owned a cellphone in 2019. 93% of millennials ages 24-39 years old own a smartphone, and so a significant number of recipients are able to view MMS messages with photos. Cellphones are used equally across urban and rural areas, and over 22% of adults are cellphone dependent for internet access, meaning they do not have a computer and broadband at home, which was found to be more common for Hispanic and Black families compared to white families, and lower income families compared to higher income families. Portions of Washtenaw County--both urban and rural--do not have home internet access, so text messaging is an effective way of reaching these often-vulnerable populations.

TALK's success at reaching underserved populations was also due to the outreach techniques YDL developed during the pilot phase, which centered on building strong partnerships with other community organizations working with low-income parents. Our local partners included the sheriff's office, the Great Start Collaborative, Early On, Head Start, pediatricians, and public schools which displayed flyers and shared the program directly with parents. Staff promoted TALK at the Women Infants and Children nutrition office, food distribution centers, and the Farmers' Markets in Ypsilanti, where low-income families using a SNAP card get double dollars when shopping for fresh fruits and vegetables. Washtenaw Literacy LIFT tutors (Learning is a Family Thing) used TALK messages during weekly tutoring sessions with low literacy parents. Scaling the TALK program will include developing training webinars and toolkits so that other libraries can build partnerships in their own communities to reach a diverse group of parents.

### **NATIONAL IMPACT**

After testing and improving the rollout of TALK in Michigan and forming a plan to rollout in Indiana based on evaluation data, MCLS will develop a tiered consortial subscription model based on a library's population size to allow participating libraries to continue to use the service after the grant period and new libraries in any state to offer TALK to parents in their communities for a low cost through the MCLS server when the grant period ends. MCLS will also make the software that allows TALK messages to be sent through Twilio available as an open source product so any library or organization can replicate TALK on their own server. MCLS will offer their technical expertise at a reasonable cost to libraries or organizations if they want to use the open source technology on their own server.

At the end of year three, we will have developed, evaluated, and improved two toolkits, a Publicity Toolkit and a Building Successful Partnerships Toolkit, as well as training webinars. These will all be available to any library wishing to offer TALK to parents in their community. We will be able to serve Spanish speaking families as well as those who speak English, and we will have worked with our advisory to expand relationships with national organizations including Success by 6, WIC, Head Start, and Reach Out and Read to help any library easily use our Building Successful Partnerships Toolkit to form collaborations at the local level with pediatricians, health departments, and preschools to help ensure the success of the program in their community.

ALSC supports TALK, which is aligned with their ECRR curriculum. In year three we will discuss expansion plans with ALSC and hope the timing aligns with their rebranding initiative, making it easy to promote TALK as an ECRR extension to any of the 6,000 libraries nationwide using ECRR. We will present the project at the 2023 American Library Association national conference to promote and encourage other libraries to use the service. We look forward to the end of the project when TALK will be ready and available for any library to use to take the lead in expanding early literacy knowledge to more parents and building a local coalition to prepare children for school success in their community.

## SCHEDULE OF COMPLETION

Year 1	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021
Hire and train part time support staff member												
Develop and test text messaging platform with MCLS												
Translate text messages to Spanish												
Update TALK website												
Convene an advisors' meeting to develop the <i>Building Successful Partnerships Toolkit</i>												
Update and expand publicity materials and create a system through which other libraries can access them												
Develop training materials for libraries including webinars and in-person presentations												
Launch piloting phase of new text message delivery platform in Washtenaw County with current TALK users												
Evaluate Washtenaw County pilot phase and adjust platform in response to feedback												
Outreach and training for libraries in Calhoun County/Battle Creek												
Launch program in Calhoun County, Michigan												
Evaluate Calhoun County launch												
Outreach and training for Michigan libraries who choose to promote TALK												

**Connecting Families to Libraries with Text Messages for Early Learning** Ypsilanti District Library

<b>Year 2</b>	Aug 2021	Sep 2021	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	Jul 2022
Launch program statewide												
Continue to provide support services for libraries implementing the TALK program and training for new libraries who sign up												
Present the project at MLA Spring Institute for Youth Services library staff												
Evaluation of the first year of service and the efficacy of TALK as an early learning tool												
Develop a tiered consortial conscription model based on library size												
<b>Year 3</b>	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023	Mar 2023	Apr 2023	May 2023	Jun 2023	Jul 2023
Develop a model and expand service to Indiana												
Evaluation of the second year of service and the efficacy of TALK as an early learning tool												
Initiate a conversation with ALSC about offering TALK nationally												
Present project results at ALA national meeting												
Prepare open source software and toolkits for other libraries to use nationally												
Full evaluation of the grant period and report writing												



## DIGITAL PRODUCT FORM

### INTRODUCTION

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to digital products that are created using federal funds. This includes (1) digitized and born-digital content, resources, or assets; (2) software; and (3) research data (see below for more specific examples). Excluded are preliminary analyses, drafts of papers, plans for future research, peer-review assessments, and communications with colleagues.

The digital products you create with IMLS funding require effective stewardship to protect and enhance their value, and they should be freely and readily available for use and reuse by libraries, archives, museums, and the public. Because technology is dynamic and because we do not want to inhibit innovation, we do not want to prescribe set standards and practices that could become quickly outdated. Instead, we ask that you answer questions that address specific aspects of creating and managing digital products. Like all components of your IMLS application, your answers will be used by IMLS staff and by expert peer reviewers to evaluate your application, and they will be important in determining whether your project will be funded.

### INSTRUCTIONS

If you propose to create digital products in the course of your IMLS-funded project, you must first provide answers to the questions in **SECTION I: INTELLECTUAL PROPERTY RIGHTS AND PERMISSIONS**. Then consider which of the following types of digital products you will create in your project, and complete each section of the form that is applicable.

#### **SECTION II: DIGITAL CONTENT, RESOURCES, OR ASSETS**

Complete this section if your project will create digital content, resources, or assets. These include both digitized and born-digital products created by individuals, project teams, or through community gatherings during your project. Examples include, but are not limited to, still images, audio files, moving images, microfilm, object inventories, object catalogs, artworks, books, posters, curricula, field books, maps, notebooks, scientific labels, metadata schema, charts, tables, drawings, workflows, and teacher toolkits. Your project may involve making these materials available through public or access-controlled websites, kiosks, or live or recorded programs.

#### **SECTION III: SOFTWARE**

Complete this section if your project will create software, including any source code, algorithms, applications, and digital tools plus the accompanying documentation created by you during your project.

#### **SECTION IV: RESEARCH DATA**

Complete this section if your project will create research data, including recorded factual information and supporting documentation, commonly accepted as relevant to validating research findings and to supporting scholarly publications.

## **SECTION I: INTELLECTUAL PROPERTY RIGHTS AND PERMISSIONS**

**A.1** We expect applicants seeking federal funds for developing or creating digital products to release these files under open-source licenses to maximize access and promote reuse. What will be the intellectual property status of the digital products (i.e., digital content, resources, or assets; software; research data) you intend to create? What ownership rights will your organization assert over the files you intend to create, and what conditions will you impose on their access and use? Who will hold the copyright(s)? Explain and justify your licensing selections. Identify and explain the license under which you will release the files (e.g., a non-restrictive license such as BSD, GNU, MIT, Creative Commons licenses; RightsStatements.org statements). Explain and justify any prohibitive terms or conditions of use or access, and detail how you will notify potential users about relevant terms and conditions.

**A.2** What ownership rights will your organization assert over the new digital products and what conditions will you impose on access and use? Explain and justify any terms of access and conditions of use and detail how you will notify potential users about relevant terms or conditions.

**A.3** If you will create any products that may involve privacy concerns, require obtaining permissions or rights, or raise any cultural sensitivities, describe the issues and how you plan to address them.

## **SECTION II: DIGITAL CONTENT, RESOURCES, OR ASSETS**

**A.1** Describe the digital content, resources, or assets you will create or collect, the quantities of each type, and the format(s) you will use.

**A.2** List the equipment, software, and supplies that you will use to create the digital content, resources, or assets, or the name of the service provider that will perform the work.

**A.3** List all the digital file formats (e.g., XML, TIFF, MPEG, OBJ, DOC, PDF) you plan to use. If digitizing content, describe the quality standards (e.g., resolution, sampling rate, pixel dimensions) you will use for the files you will create.

### **Workflow and Asset Maintenance/Preservation**

**B.1** Describe your quality control plan. How will you monitor and evaluate your workflow and products?

**B.2** Describe your plan for preserving and maintaining digital assets during and after the award period. Your plan should address storage systems, shared repositories, technical documentation, migration planning, and commitment of organizational funding for these purposes. Please note: You may charge the federal award before closeout for the costs of publication or sharing of research results if the costs are not incurred during the period of performance of the federal award (see 2 C.F.R. § 200.461).

## **Metadata**

**C.1** Describe how you will produce any and all technical, descriptive, administrative, or preservation metadata or linked data. Specify which standards or data models you will use for the metadata structure (e.g., RDF, BIBFRAME, Dublin Core, Encoded Archival Description, PBCore, PREMIS) and metadata content (e.g., thesauri).

**C.2** Explain your strategy for preserving and maintaining metadata created or collected during and after the award period of performance.



**C.3** Explain what metadata sharing and/or other strategies you will use to facilitate widespread discovery and use of the digital content, resources, or assets created during your project (e.g., an API [Application Programming Interface], contributions to a digital platform, or other ways you might enable batch queries and retrieval of metadata).

### **Access and Use**

**D.1** Describe how you will make the digital content, resources, or assets available to the public. Include details such as the delivery strategy (e.g., openly available online, available to specified audiences) and underlying hardware/software platforms and infrastructure (e.g., specific digital repository software or leased services, accessibility via standard web browsers, requirements for special software tools in order to use the content, delivery enabled by IIIF specifications).

**D.2.** Provide the name(s) and URL(s) (Universal Resource Locator), DOI (Digital Object Identifier), or other persistent identifier for any examples of previous digital content, resources, or assets your organization has created.

## **SECTION III: SOFTWARE**

### **General Information**

**A.1** Describe the software you intend to create, including a summary of the major functions it will perform and the intended primary audience(s) it will serve.

**A.2** List other existing software that wholly or partially performs the same or similar functions, and explain how the software you intend to create is different, and justify why those differences are significant and necessary.

### **Technical Information**

**B.1** List the programming languages, platforms, frameworks, software, or other applications you will use to create your software and explain why you chose them.

**B.2** Describe how the software you intend to create will extend or interoperate with relevant existing software.

**B.3** Describe any underlying additional software or system dependencies necessary to run the software you intend to create.

**B.4** Describe the processes you will use for development, documentation, and for maintaining and updating documentation for users of the software.

**B.5** Provide the name(s), URL(s), and/or code repository locations for examples of any previous software your organization has created.

## Access and Use

**C.1** Describe how you will make the software and source code available to the public and/or its intended users.

**C.2** Identify where you will deposit the source code for the software you intend to develop:

Name of publicly accessible source code repository:

URL:

## SECTION IV: RESEARCH DATA

As part of the federal government's commitment to increase access to federally funded research data, Section IV represents the Data Management Plan (DMP) for research proposals and should reflect data management, dissemination, and preservation best practices in the applicant's area of research appropriate to the data that the project will generate.

**A.1** Identify the type(s) of data you plan to collect or generate, and the purpose or intended use(s) to which you expect them to be put. Describe the method(s) you will use, the proposed scope and scale, and the approximate dates or intervals at which you will collect or generate data.

**A.2** Does the proposed data collection or research activity require approval by any internal review panel or institutional review board (IRB)? If so, has the proposed research activity been approved? If not, what is your plan for securing approval?

**A.3** Will you collect any sensitive information? This may include personally identifiable information (PII), confidential information (e.g., trade secrets), or proprietary information. If so, detail the specific steps you will take to protect the information while you prepare it for public release (e.g., anonymizing individual identifiers, data aggregation). If the data will not be released publicly, explain why the data cannot be shared due to the protection of privacy, confidentiality, security, intellectual property, and other rights or requirements.

**A.4** What technical (hardware and/or software) requirements or dependencies would be necessary for understanding retrieving, displaying, processing, or otherwise reusing the data?

**A.5** What documentation (e.g., consent agreements, data documentation, codebooks, metadata, and analytical and procedural information) will you capture or create along with the data? Where will the documentation be stored and in what format(s)? How will you permanently associate and manage the documentation with the data it describes to enable future reuse?

**A.6** What is your plan for managing, disseminating, and preserving data after the completion of the award-funded project?

**A.7** Identify where you will deposit the data:

Name of repository:

URL:

**A.8** When and how frequently will you review this data management plan? How will the implementation be monitored?