

Application: GaDOE State Schools B5 DHH Statewide Outreach

Stacey Tucci - stucci@doe.k12.ga.us
L4GA 2019 Grant Applications To Review

Summary

ID: 0000000211
Last submitted: Feb 10 2020 04:14 PM (EST)

District Profile

Completed - Feb 10 2020

District Profile

District Name

GaDOE State Schools

District Contact Information

Please enter the information for your district's main L4GA 2019 contact.

Name	Stacey Tucci
Position	Language and Literacy Initiative Coordinator
Email	stucci@doe.k12.ga.us
Phone	404-694-7645

Grant Fiscal Agent MOU

Please upload your completed Grant [Fiscal Agent MOU](#). You can find this document on the L4GA Grant website.

[GaDOE State Schools_L4GA Grant_Fiscal Agent MOU.docx.pdf](#)

Filename: GaDOE State Schools_L4GA Grant_Fiscal Agent MOU.docx.pdf **Size:** 45.3 kB

GaDOE Conflict of Interest and Disclosure Policy

Please upload your completed [GaDOE Conflict of Interest and Disclosure Policy](#). You can find this document on the L4GA Grant website.

[GaDOE State Schools_L4GA Grant_GaDOE_Conflict of Interest and Disclosure Policy RR.doc.pdf](#)

Filename: GaDOE State Schools_L4GA Grant_GaDOE_Conflict of Interest and Disclosure Policy RR.doc.pdf

Size: 162.5 kB

Previous Grantee

Has your district been a Striving Readers or L4GA 2017 grant recipient? If yes, please specify years.

no

Growing Readers

Does your district participate in the Growing Readers Program with the Governor's Office of Student Achievement (GOSA)?

no

Get Georgia Reading

Please complete the Get [Georgia Reading Campaign Community Commitment form found here](#)

L4GA 2019 Full Application

Completed - Feb 10 2020

L4GA 2019 Full Application (*except Section 8)

L4GA 2019 Grant Application

*-- all sections *except Section 8: B5 Project/School Literacy Plan - that is uploaded as a separate task*

All files uploaded files should be .pdf.

Please use a descriptive file name for each section (examples at top of each section).

Please Upload:

YourDistrictSectionTitle.pdf - DogwoodCountyNarrative.pdf, ex

Section 1: Upload Local Education Agency (LEA)-Partnership Narrative (to be completed by LEA- Community Literacy Task Force)

15 Points

This narrative is a highly important factor in ensuring that the reviewer understands the community, the local education agency (in most cases, this is a school district), the feeder system identified, and how this initiative will assist with the literacy development across the identified community, including in and out of schools.

The LEA-Partnership Narrative should be limited to 2500 words.

Absolute Priorities for L4GA-Sub-grants:

- Identification of feeder system(s) and community served
- Identification of all LEA-Partnership partners, including early childhood service providers
- A brief description of the feeder system(s) identified, and history of the L4GA LEA-Partnership
- Population demographics of the community
- Climate Ratings for each school involved in the proposed partnership and/or status of implementation of PBIS
- Student literacy/ELA outcomes of the feeder system

Plan for engaging

- early childhood education providers
- P-20 research-practitioner partnership(s) and literacy faculty in the local teacher preparation programs
- community coalition

[GaDOE State Schools_L4GA Section 1_LEA Partnership Narrative_FINAL_2.10.20.pdf](#)

Filename: GaDOE State Schools_L4GA Section 1_LEA Partnership Narrative_FINAL_2.10.20.pdf **Size:** 766.4 kB

Please Upload:

YourDistrictSectionTitle.pdf - DogwoodCountyMgtPlan.pdf, ex.

Section 2: LEA-Partnership Management Plan and Key Personnel (to be completed by LEA-Community Literacy Task Force)

10 points

This section will apprise the reviewer of how the grant will be supported from the district level. Who are the key people involved in the grant? How will the grant function in terms of the whole district strategic plan? How will financial aspects of the grant be handled? Will there be a dedicated staff member at the district office with the responsibility of grants administration? Though this is certainly not an exhaustive list, these questions should be covered in your response. **The LEA-Partnership Management Plan and Key Personnel should be limited to 1000 words.**

LEA office support for grant management.

- Who are the key people involved in the grant?
- How will the grant ensure services in B-5?
- How will the grant function in terms of the whole district strategic plan and comprehensive needs assessment?
- How will financial aspects of the grant be handled?
- Will there be a dedicated staff member at the district office with the responsibility of grants administration?

Ability of the LEA to adequately administer the funding.

Any financial audit findings over the past three years should be discussed in this section.

Controls for spending should be pointed out.

Note: L4GA 2017 and L4GA 2019 funds cannot be commingled.

[GaDOE State Schools_L4GA Section 2_LEA Partnership Management Plan and Key Personnel FINAL 2.10.20.pdf](#)

Filename: GaDOE State Schools_L4GA Section 2_LEA Partnership Management Plan and Key Personnel_FINAL_2.10.20.pdf **Size:** 316.5 kB

Please Upload:

Section 3: Needs Assessment and Root Cause Analysis (to be completed by district office)

10 points

This section should describe the needs assessment process. What assets exist? How were root causes determined using the needs assessment process, and how will this information be used to develop a project that will impact all students birth to grade 12 in the LEA community? **The Needs Assessment and Root Cause Analysis should be limited to 1000 words.**

B-5

Analysis of data related to other learning outcomes and school readiness.

Analysis of:

- Developmentally appropriate instruction and curriculum
- Professional learning provided to educators and directors
- Family engagement strategies
- Leadership effectiveness
- Other supports for the the Whole Child and Well-rounded Education
- Coordination efforts with K-12

K-12

Comprehensive needs assessment and root cause analysis using Georgia's System for Continuous Improvement (NOTE: LEAs should use the same approach as with their federal Comprehensive LEA Improvement Plans (CLIPs), District Improvement Plans (DIPs), and School Improvement Plans (SIPs); therefore, the L4GA plan should complement local strategic plans):

- Coherent Instructional System
 - Past instructional initiatives
 - Current instructional initiatives
 - How to identify students for interventions
- Community and Family Engagement and Empowerment
- Engaged Leadership
- Positive Learning Environment
- Professional Capacity
- Other Supports for the Whole Child and Well-rounded Education

Coordination efforts with B-5, out-of-school providers, and community organizations.

For additional Technical Assistance for Community Partnerships, consider:

- GA Family Connection Partnership (GFCP; Get Georgia Reading Campaign)
- Governor's Office of Student Achievement (GOSA)
- Literacy for All Georgia
- UGA Archway Partnership
- Georgia Partnership for Excellence in Education (GPEE)

[GaDOE State Schools_L4GA Section 3_LEA Partnership Needs Assessment and Root Cause Analysis_FINAL_2.10.20.pdf](#)

Filename: GaDOE State Schools_L4GA Section 3_LEA Partnership Needs Assessment and Root Cause Analysis_FINAL_2.10.20.pdf **Size:** 305.3 kB

Please Upload:

YourDistrictSectionTitle.pdf - DogwoodCountyProjGoals.pdf, ex.

Section 4: Project Goals, Objectives, Activities, Outputs, Outcomes, and Supports Needed (to be completed by district office)

10 points

This section should provide the reviewer with the actual implementation plan proposed for funding. The reviewer must understand who, what, when and how the actual performances will utilize assets and address the needs determined in the “root cause” analysis. It will not be enough to name programs and strategies; the application should show how the strategies and programs align to best practices and directly address the needs of the children in the community by working through community organizations, early care/learning providers, and schools. The plan should show how the community-level supports, instructional strategies, delivery models are consistent with Evidenced Based Practices and directly address the needs of the students, educators, parents and community. **The Project Goals, Objectives, Activities, Outputs, Outcomes, and Supports Needed should be limited to 1000 words.**

- Implementation plan proposed for funding.
- The plan should show how the instructional strategies, delivery models and programs are consistent with EBP and directly address the needs of the students and educators.
- The plan should show how community partnerships are developed in ways consistent with evidence-based practices and directly address the needs of students and families.

For additional Technical Assistance for Community Partnerships, consider:

- GA Family Connection Partnership (GFCP; Get Georgia Reading Campaign)
- Governor’s Office of Student Achievement (GOSA)
- Literacy 4 All
- UGA Archway Partnership
- Georgia Partnership for Excellence in Education (GPEE)

[GaDOE State Schools_L4GA Section 4_LEA Partnership Project Goals Objectives Activities Outputs Outcomes and Supports Needed_FINAL_2.10.20.pdf](#)

Filename: GaDOE State Schools_L4GA Section 4_LEA Partnership Project Goals Objectives Activities Outputs Outcomes and Supports Needed_FINAL_2.10.20.pdf **Size:** 193.8 kB

Please Upload:

DistrictSectionTitle.pdf - DogwoodCountyDataAnalysis.pdf, ex.

Section 5: Assessment/Data Analysis Plan (to be completed by district office)

10 points

In this section, indicate what community-level data will be utilized (e.g., poverty, transportation, healthcare, etc.) in addition to assessment data. For example, vision screeners may be an essential data point as a way to target vision supports for students.

In addition, it is important to spell out specifically who, what, when and how the assessments will be given at the school level and how they will be analyzed by a team representing the early care providers, the community, local teacher educators/professional development providers, the schools, and the district.

The procedures involved in determining how instruction is developed based on the assessment data should be carefully described. Assessment protocols are specifically detailed including: who, what, and when the assessments will be given as well as analyzed. Procedures for educators' analysis of local assessment data to inform instruction should also be included. **The Assessment/Data Analysis Plan should be limited to 1000 words.**

- Assurance that assessment and evaluation requirements for the SEA will be completed.
- Estimated cost for assessments included in proposed LEA-Partnership budget
- Detailed assessment protocols are specifically detailed including: who, what, and when the assessments will be given as well as analyzed.

Procedures for educators' analysis of local assessment data to inform instruction

[GaDOE State Schools_L4GA Section 5_LEA Partnership Assessment Data Analysis Plan_FINAL_2.10.20.pdf](#)

Filename: GaDOE State Schools_L4GA Section 5_LEA Partnership Assessment Data Analysis Plan_FINAL_2.10.20.pdf **Size:** 187.7 kB

Please Upload:

DistrictSectionTitle.pdf - DogwoodCountyPL.pdf, ex.

Section 6: Professional Learning Strategies Identified on the Basis of Documented Need (to be completed by district office)

10 points

Professional learning is a key component of the grant. There should be a direct tie to literacy instruction as well as include all teachers of reading/literacy including early care and learning providers, CTAE, Special Education teachers, all content teachers as well as community partners and parents as appropriate. This section of the grant should provide the district's overall plan for engaging LEA-Partners with L4GA Professional Learning offerings. NOTE: LEA-Partners must agree to utilize their L4GA professional learning plan as their singular plan for literacy-related professional learning to avoid layering conflicting professional learning opportunities that could be available in a large LEA. **The Professional Learning plan should be limited to 1000 words.**

Plan for engaging LEA-Partners with Professional Learning offerings:

- Time allocated for collaborative planning time per age/grade level team and vertical teams.
- Local PL supports (e.g., PLCs, collaborative planning, coaching, mentoring)
- Online PL supports
- Institutes
 - Topics of interest for PL for each audience (e.g., early learning; literacy interventionists; community/family liaisons; school leaders, etc.)

[GaDOE State Schools_L4GA Section 6_LEA Partnership Professional Learning Strategies Identified on the Basis of Documented Need_FINAL_2.10.20.pdf](#)

Filename: GaDOE State Schools_L4GA Section 6_LEA Partnership Professional Learning Strategies Identified on the Basis of Documented Need_FINAL_2.10.20.pdf **Size:** 121.3 kB

Please Upload:

DistrictSectionTitle.pdf - DogwoodCountyResources.pdf, ex.

Section 7: Resources, Strategies, and Materials to Support Implementation of the Literacy Plan (to be completed by district office)

10 points

This section details all of the strategies and human or instructional resources that will be used or paid for as a result of L4GA funding. They should all tie back to the needs assessment, student data, and root cause analysis. They should directly impact literacy, access to print, community engagement, student supports, instructional engagement and/or teacher support. It is not necessary to name specific products; generic descriptions are adequate. Technology purchases must be justified as a way to support literacy improvement. Personnel are allowable as a resource paid for by grant funds; however, please note that sustainability will be essential to the plan. **The Resources, Strategies, and Materials section should be limited to 1000 words.**

Instructional resources that will be used or purchased as a result of L4GA funding. Services that will be purchased as a result of the L4GA funding.

Notes:

- All expenditures should all tie back to community and student data, the comprehensive needs assessment, and root cause analysis.
- All expenditures should directly impact literacy, access to print, student engagement, and teacher support. They should be consistent with EBP.
- Expenditures should support activities primarily offered during the regular school day but may also include out-of-school time and instruction.
- This is not a technology grant; only technology supports vital to literacy improvement and instruction should be allocated.
- Any personnel expenditures are allowable but should be considered carefully as the grant funds are time-limited. Sustainability plans for maintaining positions after grants end should be considered.

Examples of strategies, human resources, or instructional resources:

- SEE-KS professional learning communities
- Growing Readers instructional coaching
- MTSS implementation supports
- Executive Coaching for literacy leadership

[GaDOE State Schools L4GA Section 7 LEA Partnership Grant Budget 2.10.20.pdf](#)

Filename: GaDOE State Schools_L4GA Section 7_LEA Partnership Grant Budget_2.10.20.pdf **Size:** 487.7

Please Upload:**DistrictSectionTitle.pdf - DogwoodCountyBudget.pdf, ex.****Section 9: Budget Summary (to be completed by district office)****unscored**

Each application should have a budget summary in narrative form. The budget summary will highlight how the LEA/schools/centers/organizations plan to use their L4GA grant funds. The readers will have access to the budget summary so they can get a sense of the completed project. The budget summary will not be scored by readers. The budget summary will be reviewed by a committee of GaDOE staff including:

Federal Program managers, Grants Accounting Personnel, L4GA program staff, and a member of the Audit team. **The budget summary should be limited to 600 words.**

Notes:

Unallowable Expenditures

- Preparation of the Proposal: Costs to develop, prepare, and/or write the L4GA proposal cannot be charged to the grant directly or indirectly by either the agency or contractor.
- Pre-Award Costs: Pre-award costs may not be charged against the grant. Funds can be used only for activities conducted and costs incurred after the start date of the grant.
- Entertainment, Refreshments, Snacks not associated with a literacy event, community partnership event or parent event.
- Game systems and game cartridges are unallowable.
- Unapproved out of state or overnight field trips, including retreats, lock-ins, etc.
- Incentives (e.g., plaques, trophies, stickers, t-shirts, give-a-ways) not associated with literacy improvement. Books, periodical subscriptions, bookmarks etc. are allowable.
- Decorative Items not associated with literacy or family literacy.
- Purchase of Facilities
- Land acquisition
- Capital Improvements, Permanent Renovations except family literacy centers, media centers or reading centers in the classroom.
- Direct charges for items/services that the indirect cost rate covers
- Dues to organizations, federations, or societies for personal benefits. (Does not include

professional organizations)

- Any costs not allowed for Federal projects per EDGAR, which may be accessed at <http://www.ed.gov/policy/fund/reg/edgarReg/edgar.html>.

NOTE: This is NOT an all-inclusive list of unallowable expenses. If you have questions about unallowable expenses, please e-mail questions to jmorrill@doe.k12.ga.us

[GaDOE State Schools_L4GA Section 9_LEA Partnership Budget Summary_FINAL_2.10.20.pdf](#)

Filename: GaDOE State Schools_L4GA Section 9_LEA Partnership Budget Summary_FINAL_2.10.20.pdf

Size: 115.1 kB

Please Upload:

DistrictSectionTitle.pdf - DogwoodCountyAppendix.pdf

Appendix: references for evidence-based practices; letters of commitment, etc. (you may upload more than one file)

[GaDOE State Schools_Partner Template for L4GA Grant Application_JEmerson_GSU.pdf](#)

Filename: GaDOE State Schools_Partner Template for L4GA Grant Application_JEmerson_GSU.pdf **Size:** 99.2 kB

[GaDOE State Schools_Partner Template for L4GA Grant Application_CMatthews_State Schools.pdf](#)

Filename: GaDOE State Schools_Partner Template for L4GA Grant Application_CMatthews_State Schools.pdf **Size:** 99.8 kB

[GaDOE State Schools_Partner Template for L4GA Grant Application_Evans_Georgia PINES.pdf](#)

Filename: GaDOE State Schools_Partner Template for L4GA Grant Application_Evans_Georgia PINES.pdf **Size:** 90.0 kB

[GaDOE State Schools_Partner Template for L4GA Grant Application_GA Mobile Audiology Program.pdf](#)

Filename: GaDOE State Schools_Partner Template for L4GA Grant Application_GA Mobile Audiology Program.pdf **Size:** 708.5 kB

[GaDOE State Schools_Partner Template for L4GA Grant Application_JCouture_DECAL.pdf](#)

Filename: GaDOE State Schools_Partner Template for L4GA Grant Application_JCouture_DECAL.pdf **Size:** 171.1 kB

[GaDOE State Schools_Partner Template for L4GA Grant Application_NScheetz_VSU.pdf](#)

Filename: GaDOE State Schools_Partner Template for L4GA Grant Application_NScheetz_VSU.pdf **Size:** 78.4 kB

[GaDOE State Schools Partner Template for L4GA Grant Application Tucci OCGA 30 1 5.pdf](#)

Filename: GaDOE State Schools_Partner Template for L4GA Grant Application_Tucci_OCGA 30_1_5.pdf
Size: 106.1 kB

[GaDOE State Shools Partner Template for L4GA Grant Application CYates Cox Campus.pdf](#)

Filename: GaDOE State Shools_Partner Template for L4GA Grant Application_CYates_Cox Campus.pdf
Size: 116.7 kB

[GaDOE State Schools L4GA Grant Foundations for Literacy Research.pdf](#)

Filename: GaDOE State Schools_L4GA Grant_ Foundations for Literacy Research.pdf **Size:** 765.4 kB
[GaDOE State Schools L4GA Grant Fingerspelling Our Way to Reading Research.pdf](#)

Filename: GaDOE State Schools_L4GA Grant_Fingerspelling Our Way to Reading Research.pdf **Size:** 1.1 MB

School Profile

Completed - Feb 10 2020

B5 Project/School Profile

You will complete a school profile for each B5 Project (1) and School (multiple) included in your district application.

B5 Project/School Information

If you are entering information for your **B5 Plan**, and you do not have a school ID, enter 0001 in the text box.

System Name	GaDOE Division of State School
School or Center Name	Atlanta Area School for the Deaf/Georgia PINES
System ID	799
School ID	1893

Non-traditional Grade Configuration

Funding is based on **B5, K-5, 6-8, 9-12** allocations. Please indicate + describe below (PK-8, ex) if the school you are entering has a non-traditional configuration.

This is to ensure that we get the correct total FTE for each grade band (that we include the sixth graders from a K-6 school in the 6-8 count, for example).

Early Intervention through 12th grade

Level

Please select the level that is most appropriate to describe the B5 project or elem/middle/high school you are entering. If the school has a non-traditional configuration like PK-6, for example, you would select Elementary.

As a reminder, Pre-K classrooms (even if they are in an elementary building) should be included in your B5 profile/plan.

Early Learning (Birth through Age 5 - incl PK classrooms))

Number of Certified Teachers in School

41

Number of Paraprofessionals or Teaching Assistants in School

15

Principal or Director

Name	Kenney Moore
Position	Director GaDOE Division of State Schools
Email	kemoore@doe.k12.ga.us
Phone	404-558-3863

L4GA 2019 School Contact

This person is the district contact for the grant project at the school (administrator or coach, ex.).

Name	Stacey Tucci
Position	Language and Literacy Initiative Coordinator
Email	stucci@doe.k12.ga.us
Phone	404-649-7645

L4GA 2019 B5 Project/School Literacy Plan

Completed - Feb 10 2020

Please Upload:

DistrictSchoolB5/Elem/Mid/HighLitPlan - DogwoodCountyJacksonElemLitPlan.pdf, ex.

Section 8: School/Center Literacy Plans (to be completed by each school and/or early care center involved)

15 points

Each community served by an LEA is unique and therefore each school and early care center should have a detailed literacy plan that supports literacy implementation for children, families, educators, and community leaders who are part of the community. This literacy plan should be consistent with LEA-partnership goals, objectives, professional learning and models of tiered supports. It also should support coordination of all resources available so that L4GA funding is used to fill strategic gaps determined in needs assessments. **Each school/center literacy plan should be limited to 2500 words. It is not necessary to write the plan in narrative form if the school/LEA would rather develop or use a template.**

- Leadership Team members (including, but not limited to, teachers, specialized staff, school librarians, community organization representatives, teacher educators, families, and leaders)
- How the B-5 and K-12 literacy team will coordinate comprehensive literacy instruction, community activities, and literacy assessments to launch, monitor, and improve implementation
- How evidence-based practices and activities will be selected

- How to identify students for literacy intervention or other support services
- How to monitor the implementation and effectiveness of services

[GaDOE State Schools L4GA Grant Partner Templates](#)

Filename: GaDOE_State_Schools_L4GA_Grant_Partner_aLpdCJR.pdf **Size:** 1.5 MB



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Georgia Department of Education Conflict of Interest and Disclosure Policy

Georgia's conflict of interest and disclosure policy is applicable to entities conducting business on behalf of and /or doing business with the Department and entities receiving a grant to implement a program and/or project approved by the State Board of Education. This policy is applicable for entities receiving state and/or Federal funds.

Questions regarding the Department's conflict of interest and disclosure policy should be directed to the program manager responsible for the contract, purchase order and/or grant.

I. Conflicts of Interest

It is the policy of the Georgia Department of Education (GaDOE) to avoid doing business with Applicants, subcontractors of Applicants who have a conflict of interest or an appearance of a conflict of interest. The purpose of this policy is to maintain the highest level of integrity within its workforce, and to ensure that the award of grant Agreements is based upon fairness and merit.

a. Organizational Conflicts of Interest.

All grant applicants ("Applicants") shall provide a statement in their proposal which describes in a concise manner all past, present or planned organizational, financial, contractual or other interest(s) with an organization regulated by the GaDOE, including but not limited to Local Education Agencies (LEAs), or with an organization whose interests may be substantially affected by GaDOE activities, and which is related to the work under this grant solicitation. The interest(s) in which conflict may occur shall include those of the Applicant, its affiliates, proposed consultants, proposed subcontractors and key personnel of any of the above. Past interest shall be limited to within one year of the date of the Applicant's grant proposal. Key personnel shall include:

- any person owning more than 20% interest in the Applicant
- the Applicant's corporate officers
- board members
- senior managers
- any employee who is responsible for making a decision or taking an action on this grant application or any resulting Agreement where the decision or action can have an economic or other impact on the interests of a regulated or affected organization.

- i. The Applicant shall describe in detail why it believes, in light of the interest(s) identified in (a) above, that performance of the proposed Agreement can be accomplished in an impartial and objective manner.
- ii. In the absence of any relevant interest identified in (a) above, the Applicant shall submit in its grant application a statement certifying that to the best of its knowledge and belief no affiliation exists relevant to possible conflicts of interest. The Applicant must obtain the same information from potential subcontractors prior to award of a subcontract.
- iii. GaDOE will review the statement submitted and may require additional relevant information from the Applicant. All such information, and any other relevant

Conflict of Interest & Disclosure Policy

information known to GaDOE, will be used to determine whether an award to the Applicant may create a conflict of interest. If any such conflict of interest is found to exist, GaDOE may:

1. Disqualify the Applicant, or
 2. Determine that it is otherwise in the best interest of GaDOE to make an award to the Applicant and include appropriate provisions to mitigate or avoid such conflict in the grant awarded.
- iv. The refusal to provide the disclosure or representation, or any additional information required, may result in disqualification of the Applicant for an award. If nondisclosure or misrepresentation is discovered after award, the resulting grant Agreement may be terminated. If after award the Applicant discovers a conflict of interest with respect to the grant awarded as a result of this solicitation, which could not reasonably have been known prior to award, an immediate and full disclosure shall be made in writing to GaDOE. The disclosure shall include a full description of the conflict, a description of the action the Applicant has taken, or proposes to take, to avoid or mitigate such conflict. GaDOE may, however, terminate the Agreement for convenience if GaDOE deems that termination is in the best interest of the GaDOE.

b. Employee Relationships

- i. The Applicant must provide the following information with its application and must provide an information update within 30 days of the award of a contract, any subcontract, or any consultant agreement, or within 30 days of the retention of a Subject Individual or former GaDOE employee subject to this clause:
 1. The names of all Subject Individuals who:
 - a. Participated in preparation of proposals for award; or
 - b. Are planned to be used during performance; or
 - c. Are used during performance; and
 - ii. The names of all former GaDOE employees, retained by the Applicant who were employed by GaDOE during the two-year period immediately prior to the date of:
 1. The award; or
 2. Their retention by the Applicant; and
 3. The date on which the initial expression of interest in a future financial arrangement was discussed with the Applicant by any former GaDOE employee whose name is required to be provided by the contractor pursuant to subparagraph (ii); and
 4. The location where any Subject Individual or former GaDOE employee whose name is required to be provided by the Applicant pursuant to subparagraphs (i) and (ii), are expected to be assigned.
- iii. "Subject Individual" means a current GaDOE employee or a current GaDOE employee's father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, husband, wife, father-in-law, mother-in-law, son-in-law, daughter-in-law, brother-in-law, sister-in-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half brother, half sister, spouse of an in-law, or a member of his/her household.
- iv. The Applicant must incorporate this clause into all subcontracts or consultant agreements awarded under this Agreement and must further require that each such

Conflict of Interest & Disclosure Policy

subcontractor or consultant incorporate this clause into all subcontracts or consultant agreements at any tier awarded under this Agreement unless GaDOE determines otherwise.

- v. The information as it is submitted must be certified as being true and correct. If there is no such information, the certification must so state.

c. **Remedies for Nondisclosure**

The following are possible remedies available to the GaDOE should an Applicant misrepresent or refuse to disclose or misrepresent any information required by this clause:

1. Termination of the Agreement.
2. Exclusion from subsequent GaDOE grant opportunities.
3. Other remedial action as may be permitted or provided by law or regulation or policy or by the terms of the grant agreement.

- d. **Annual Certification.** The Applicant must provide annually, based on the anniversary date of Agreement award, the following certification in writing to GaDOE. The annual certification must be submitted with the grantees annual end of year program report.

ANNUAL CERTIFICATION OF DISCLOSURE OF CERTAIN EMPLOYEE RELATIONSHIPS

The Applicant represents and certifies that to the best of its knowledge and belief that during the prior 12 month period:

A former GaDOE employee(s), current GaDOE employee, or Subject Individual(s) has been retained to work under the Agreement or subcontract or consultant agreement and complete disclosure has been made.

No former GaDOE employee(s), current GaDOE employee, or Subject Individual(s) has been retained to work under the Agreement or subcontract or consultant agreement, and disclosure is not required.

II. **Disclosure of Conflict of Interest after Agreement Execution**

If after Agreement execution, Applicant discovers a conflict of interest which could not reasonably have been known prior to Agreement execution; an immediate and full disclosure shall be made in writing to GaDOE. The disclosure shall include a full description of the conflict, a description of the action the Applicant has taken, or proposes to take, to avoid or mitigate such conflict. GaDOE may, however, terminate this Agreement for convenience if GaDOE deems that termination is in the best interest of GaDOE.

III. **Incorporation of Clauses**

The Applicant must incorporate the clauses in paragraphs A, B, and C of this section into all subcontracts or consultant agreements awarded under this Agreement and must further require

Conflict of Interest & Disclosure Policy

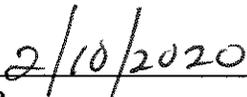
that each such subcontractor or consultant incorporate this clause into all subcontracts or consultant agreements at any tier awarded under this Agreement unless GaDOE determines otherwise.



Signature of Fiscal Agency Head (official sub-grant recipient)

Anna Bass, Finance/Business Services Manager

Typed Name of Fiscal Agency Head and Position Title



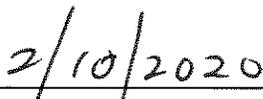
Date



Signature of Applicant's Authorized Agency Head (required)

Dr. Kenney Moore, State Schools Director

Typed Name of Applicant's Authorized Agency Head and Position Title



Date

Signature of Co-applicant's Authorized Agency Head (if applicable)

Typed Name of Co-applicant's Authorized Agency Head and Position Title (if applicable)

Date (if applicable)

Fiscal Agent Memo of Understanding

The application is the project implementation plan, not simply a proposal. This project is expected to be implemented with fidelity upon SBOE approval. When completing the application, please remember that sub-grantees will not be permitted to change the project's scope that is originally outlined in the application, scored by reviewers during the application review process, and approved by SBOE. This policy is designed to provide basic fairness to applicants for discretionary sub-grants.

Fiscal Agent/Applicant Required Signatures:

I hereby certify that I am the an authorized signatory of the fiscal agent for which grant application is made and that the information contained in this application is, to the best of my knowledge, complete and accurate. I further certify, to the best of my knowledge, that any ensuing program and activity will be conducted in accordance with all applicable federal, state, and local laws and regulations, application guidelines and instructions, assurances, and certifications. I also certify that the requested budget amounts are necessary for the implementation of the program described in the attached application.

Please sign in blue ink.

Name of Fiscal Agent's Contact Person: Kenney Moore

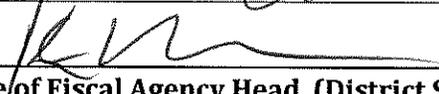
Position/Title of Fiscal Agent's Contact Person: Director, State Schools Division

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Signature of Fiscal Agency Head (District Superintendent or Executive Director)

Dr. Kenney Moore, State Schools Director
Typed Name of Fiscal Agency Head (District Superintendent or Executive Director)

2/10/2020
Date (required)

Section 6: Professional Learning Strategies Identified on the Basis of Documented Need

The fundamental goal of OCGA §30-1-5 is to ensure that all children who are DHH are on a path to grade level reading in the 3rd grade. To achieve this goal, the state needs an ecosystem that supports DHH children's language and literacy needs from birth through high school graduation; this ecosystem development requires both a top-down and bottom-up approach that supports radical adult behavior change across stakeholders. Providing evidence-based professional learning for a wide variety of stakeholders is the most effective way to kickstart sustainable behavior change at the ecosystem level. There's a Maya Angelou quote that applies perfectly to this work, "I did then what I knew how to do. Now that I know better, I do better." It is apparent that most stakeholders are doing the best they can with the current resources and knowledge they have. If more appropriate resources and knowledge are provided, stakeholders will do even better work. For that reason, this grant application focuses almost solely on professional learning.

1. Statewide Language and Literacy Assessor Trainings for test administration for children who are DHH (0-8 years): Without appropriate assessments in language and literacy development, educators and parents/caregivers cannot make informed decisions regarding early intervention services, school-age services, or literacy instruction. While the GaDOE Division of State Schools will train the first cadre of 6 assessors (and document their administration fidelity/reliability for the first two years), they will work to train additional assessors within LEAs' already existing personnel (e.g., diagnosticians, psychologists, etc.) to ensure increased sustainability. Until the Multiagency Task Force has determined the specific language and literacy assessments to be used for compliance with OCGA §30-1-5, it is difficult to estimate how many training hours will be necessary. Language and literacy assessment scores will be shared with the Multiagency Task Force led by the Language and Literacy Initiative Coordinator in the GaDOE State Schools Division. Please note: while the law requires assessments from birth to 3rd grade, it is clear that many older students who are DHH are functioning well below grade level and would also benefit from receiving biannual language and literacy assessments, thus assessment training is open to all educational professionals serving students who are DHH kindergarten through 12th grade.

2. Limited Term Pediatric Audiologist Position and Professional learning for Pediatric Diagnostic Examinations and Rescreens: The Georgia Mobile Audiology Program staff (i.e., licensed pediatric audiologists) will provide diagnostic exams in addition to training audiologists across the state to administer the diagnostic exam. Training for diagnostic exams will require 20+ hours and follow-up coaching and training will be provided for 26 months after initial training with periodic coaching and on-demand technical assistance. A diagnosis of hearing loss is connected to later literacy outcomes as children cannot receive audiological care, hearing

technology, or early intervention services without a diagnosis. Children who are DHH who do not receive early intervention have poorer language and literacy outcomes than children who do receive early intervention.¹ All data will be reported to the Mobile Audiology Program Director who will share data with the Multiagency Task Force led by the Language and Literacy Initiative Coordinator in GaDOE State Schools Division. The data will be reflected in the annual report given to the Georgia Legislature.

3. Professional Learning and Ongoing Coaching for: (1) Childcare Providers (0-5 years of age), (2) Early Interventionists (0-3 years of age), and (3) Preschool Teachers (3-5 years of age) serving children who are DHH: While stakeholders are working to achieve a statewide ecosystem in which all children who are DHH are identified/diagnosed by 3 months of age and receiving early intervention services that meet their unique needs from 6 months to 3 years of age, current data suggest this is not the norm in Georgia. Add to that children who have progressive or late onset hearing loss, and Georgia is faced with situations in which children who are DHH are in early childcare/early intervention placements with caregivers/professionals who might not have the training necessary to meet the unique needs of children who are DHH. This training will address the following areas: (1) how to identify children that are candidates for follow-up screenings/diagnostic exams to determine if an undiagnosed hearing loss is present and next steps to ensure follow-up screenings/diagnostic exams occur; (2) universal strategies related to language nutrition; and (3) DHH-specific strategies for optimizing early childhood outcomes (e.g., troubleshooting hearing technology, strategies for gaining the attention of children who use a visual language, and strategies for developing listening skills). Trainings will be available as in-person workshops (i.e., 3 workshops 3 hours each for a total of 9 training hours) as well as online courses on the Cox Campus. Opportunities to train an in-house trainer will be available after schools have implemented training strategies for 2 years. All related data will be shared with the Multiagency Task Force led by the Language and Literacy Initiative Coordinator in the GaDOE State Schools Division.

4. Professional Learning and Ongoing Coaching for current SPED Preschool Teachers (3-5 years of age), Teachers serving students who are DHH (K-12), and GSU and VSU Deaf Education Student Teachers in FfL and FOWR: FfL training requires 2 consecutive days of training for a total of 14 training hours and is open to any educational professional (e.g., GENED teachers, SPED teachers, teachers of the DHH, SLPs, reading coaches, paraprofessionals, and educational interpreters) working with children who are DHH in grades preschool through 12th grade and who use spoken English, ASL, or any form of signed/manual language. FOWR training requires 1 day of training for a total of 7 training hours and is open to any educational professional

¹ Yoshinaga-Itano, C., Sedey, A., Coulter, D.; & Mehl, A (1998). Language of early and later-identified children with hearing loss, *Pediatrics*. 102 (5) 1161-1171

working with children who are DHH grades K through 12th grade and who use some form of signed/manual language as their primary instructional language (i.e., ASL, sign-supported speech, and Simultaneous Communication). In order for teachers to receive free training/coaching and intervention materials for either (or both) intervention(s), they must agree to ongoing coaching through the Cox Campus Platform for up to two school years after completing training and they must administer and share progress monitoring data with the Multiagency Task Force led by the Language and Literacy Initiative Coordinator in the GaDOE State Schools Division. For GSU and VSU DHH teacher preparation students, trainings must be completed in the last semester before graduation. Graduates will not receive free intervention materials until they have signed a contract with a Georgia school district and are able to verify that they are serving students who are DHH. Once teachers have completed two full years of implementation in either intervention, they are eligible to apply to the train-the-trainer program in which they will be trained to train other Georgia teachers working with children who are DHH.

The train-the-trainer program and the teacher preparation program training will provide two paths for training and implementation sustainability in addition to the Cox Campus platform. The Cox Campus has acquired over 86,000 members in 6 years including members in all 50 states and 42 countries. Cox Campus completion rates average 85% which is significantly higher than the industry average of 25%. Millions of dollars have already been spent to create this sustainable virtual community of practice which is particularly powerful for parents/caregivers and education professionals in rural areas. Additional P-12 professional learning opportunities in the areas of social-emotional development (e.g., Theory of Mind), language development (e.g., Fundamentals of Listening and Spoken Language), visual decoding strategies (e.g., Visual Phonics), and bilingual (ASL/English) instruction (e.g., Bedrock Literacy and Fairview Literacy Program for the Deaf) will be available. Online coaching through the Cox Campus platform will also be available for education professionals completing these trainings.

Section 5: Assessment/Data Analysis Plan

Community Level Data Collection and Assessments

The OCGA §30-1-5 Multiagency Task Force will continue to collect and analyze a variety of community indicators related to children who are DHH's language and literacy outcomes. Currently the task force is collecting:

- population size and location data
- chronological age data
- age at diagnosis data
- information related to diagnosis (laterality, severity of loss, and ideology)
- early intervention data from Georgia PINES including:
 - age at first Early Hearing Orientation home visit
 - age at enrollment
 - language growth as measured by the Language Development Survey (LDS) (Rescorla, 1989) and the Visual Communication and Sign Language Survey (VCSL)
 - number of home visits received
 - type(s) of services received
- Early Hearing Detection and Intervention (EHDI) data from DPH for DHH children including:
 - 1-3-6 Benchmarks attainment
 - county of residence
 - race/ethnicity
- SES (when available)
- caregivers' home language
- caregivers' education level (when available)
- school placement
- age of enrollment in school-age services
- 3rd Grade Georgia Milestones ELA scores
- number of parents/caregivers completing parent advocacy training

Please see a complete reporting in the OGCA 30-1-5 Year 1 Annual Report at:

<https://dhs.georgia.gov/organization/about/language-access/georgia-commission-deaf-or-hard-hearing>.

Early intervention services data from Babies Can't Wait (BCW) were not available for the Year 1 Report but will be included in the Year 2 Report. Additionally, while DECAL identifies and collects data on students with IEPs, it does not collect information on specific SPED eligibilities. OCGA §30-1-5 now requires that all children diagnosed from 0 to 5 years of age receive a DHH flagged Georgia Testing Identifier (GTID) at the time of diagnosis. The DHH specific GTID will follow the children from diagnosis through early intervention to school age services (i.e., high

school graduation). This process was started in January 1, 2019 but was applied retroactively to children diagnosed starting August 1, 2018 as required by law. This allows the Multiagency Task Force to connect early intervention services to preschool services to school age reading outcomes to post-secondary outcomes. Additionally, this process allows Georgia to identify the entire DHH student population regardless of the student's school placement. Currently, the GaDOE does not categorize a student as DHH if the student is not receiving SPED services under a primary eligibility category of DHH. Therefore, students who are DHH and who are receiving (1) SPED services under a secondary or tertiary DHH eligibility, (2) General Education services without a 504 Plan, and (3) General Education services with a 504 Plan are not included in GaDOE's DHH student population data.

Deliverable #1: Statewide Language and Literacy Assessments required by OCGA §30-1-5

Public early intervention providers, the DPH's BCW, Georgia PINES, and public SPED preschool programs are now required to administer biannual language assessments beginning at the date of enrollment in early intervention or preschool services. At this time, OCGA § 30-1-5 assessments have not commenced officially. A list of appropriate language assessments will be chosen by the Stakeholder Advisory Committee for children from 0-3 years of age in the following categories: American Sign Language, spoken English, and home language (e.g., spoken Spanish). These assessments must be currently existing standardized assessments. The Stakeholder Advisory Committee will provide the list of approved assessments to the Multiagency Task Force for final approval. The GaDOE Division of State Schools Outreach Program is currently collecting assessment survey responses from LEAs as another guiding document for the multiagency taskforce to consider when finalizing language assessments. The same procedures will be followed for the literacy assessments to be given biannually starting with enrollment in preschool services (as early as age 3 years). As with other standardized state administered assessments, parents have the option to opt out of these assessments. The GaDOE Division of State Schools will oversee the recruitment and training of all state assessors and the data collection and data entry of assessment scores.

Deliverable #2: Limited Term Pediatric Audiologist Position and PL for Pediatric Diagnostic Examinations and Rescreens

The Georgia Mobile Audiology Program will collect demographic information on the children and families they serve in addition to information on the number of children awaiting a diagnostic examinations and follow-up rescreens (i.e., state backlog), the number of children receiving diagnostic exams from the Georgia Mobile Audiology Program audiologists (i.e., by the 3 month benchmark, after the 3 month benchmark). The Georgia Mobile Audiology Program will also collect data on the total number of audiologists Georgia Mobile Audiology Program trains to provide pediatric diagnostic examinations. All data will be shared with the Multiagency Task Force for analysis and inclusion in the OCGA §30-1-5 annual report. When appropriate, the Georgia Mobile Audiology Program and the GaDOE team will work with the Early Hearing Detection and Intervention (EHDI) program at the DPH.

Deliverable #3: Georgia PINES Early Intervention (0-3 years),
Early Childcare Providers (0-5 years), and SPED Preschool Providers (3-5 years)

Data will be collected by DECAL, the GaDOE Division of State Schools, Georgia PINES, and LEAs related to the number of professionals completing the newly developed DHH professional learning. No additional assessments will be administered other than those required by OCGA §30-1-5 as described herein. Data related to completion of online courses and engagement in ongoing coaching will be collected with support from the Cox Campus team through website analytics as well as data collected by coaches.

Deliverable #4: Foundations for Literacy (FfL) and Fingerspelling Our Way to Reading (FOWR)
Assessments related to these interventions will only be given at the school level.

School Level Data Collection and Assessments

Deliverable #1: Statewide Language and Literacy Assessments required by OCGA §30-1-5
LEAs serving children who are DHH from preschool to 3rd grade are now required to administer biannual language assessments in ASL and/or spoken English depending on the student's instructional languages beginning at the time of school enrollment. During the school age years, home language will not be assessed if the home language is not spoken English or ASL. Additionally, biannual literacy assessments are to be administered beginning at the time of school enrollment. Language and literacy assessments will be chosen through the procedures described above. The GaDOE Division of State Schools will oversee the recruitment and training of assessors and the data collection and data entry of assessment scores.

Deliverable #2: Limited Term Pediatric Audiologist Position and
Professional Learning for Pediatric Diagnostic Examinations and Rescreens
The diagnostic examination will not be given within the school setting.

Deliverable #3: SPED Preschool Providers (3-5 years of Age)
See School Level Deliverable #1.

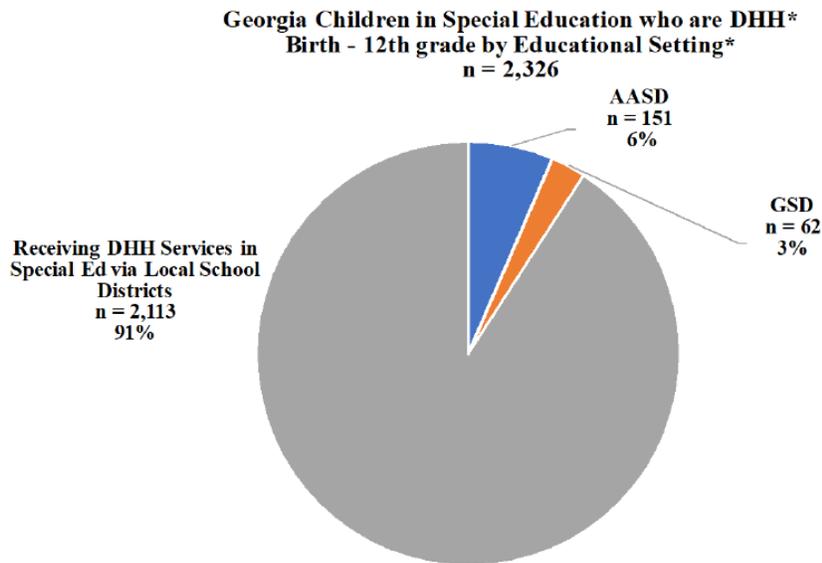
Deliverable #4: Foundations for Literacy (FfL) and Fingerspelling Our Way to Reading (FOWR)
In addition to the language and literacy assessments required by OCGA §30-1-5, there are curriculum-based measures (CBMs) that are included in *FfL* and *FOWR*. *FfL* includes 4 cumulative CBMs (e.g., progress monitoring) given approximately every 9 weeks, the first of which is given as a baseline assessment prior to instruction along with a 10-word decodable word reading test, a Letter-Sound and Letter-Name Identification Test, and a Letter-Fingerspelled Handshape and Letter-Name Identification Test. All baseline assessments will be repeated as summative assessments except the CBM as the last is cumulative. Teachers implementing *FfL* will be required to administer these tests and share the results with the Multiagency Task Force. Teachers will also use these CBMs to make instructional decisions. *FOWR* includes a baseline assessment that allows teachers to determine the appropriate intervention instructional level of which there are four (K, 1stA, 1stB, and 2nd). Each instructional

level includes a year's worth of instruction. Additional baseline tests are a Letter-Sound and Letter-Name Identification Test, and a Letter-Fingerspelled Handshape and Letter-Name Identification Test. FOWR also includes cumulative CBMs (i.e., progress monitoring) that are administered after each instructional unit. Teachers implementing FfL will be required to administer these tests and share the results with the multiagency task force. Teachers will also use these CBMs to make instructional decisions. Data related to completion of online coaching will be collected with support from the Cox Campus team through website analytics as well as data collected by coaches. Additional P-12 student and teacher implementation data in the areas of social-emotional development (e.g., Theory of Mind), language development (e.g., Fundamentals of Listening and Spoken Language), visual decoding strategies (e.g., Visual Phonics), and bilingual (ASL/English) instruction (e.g., Bedrock Literacy and Fairview Literacy Program for the Deaf) will be collected and analyzed to drive statewide instructional practices for students who are DHH P-12.

Section 3: Needs Assessment and Root Cause Analysis

The GaDOE Division of State Schools has two State Schools that support DHH children and students including the Atlanta Area School for the Deaf (Climate Rating Year 2019 = 87.00; Status of Implementation of PBIS Year 2019 = Installing) and the Georgia School for the Deaf (Climate Rating Year 2019 = 90.40; Status of Implementation of PBIS Year 2019 = Operational). Students served by the State Schools often enter the State Schools numerous grade levels behind their age appropriate typical peers. These delays are often exaggerated by the fact that the average grade for placement at the State Schools is approximately the 6th grade.

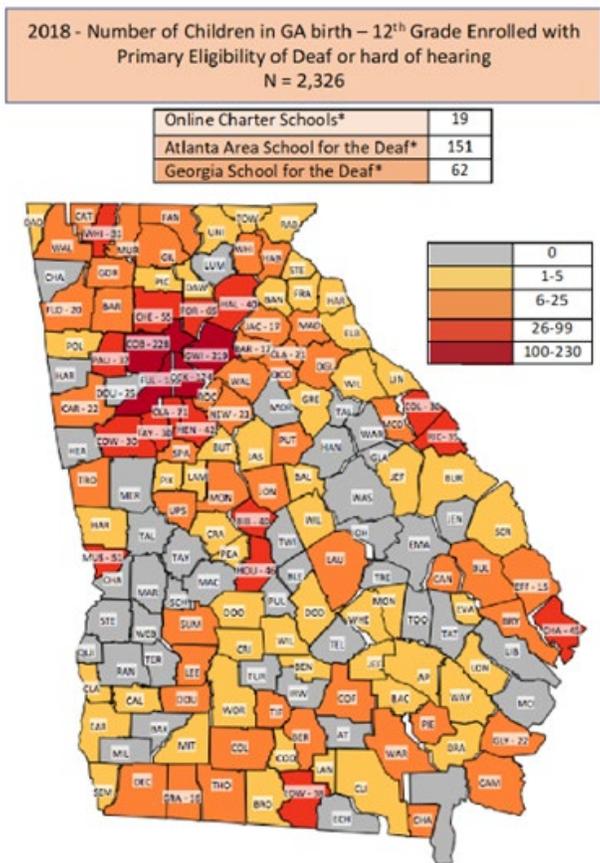
As many LEAs do not have the resources or expertise to serve this unique student population effectively, students who are referred to the State Schools are traditionally the LEAs' lowest performing students. Students attending the State Schools comprise the lowest 5% of academic performers statewide. More specifically, the majority of students served at the State Schools who are DHH (K-12) are reading below a 3rd grade reading level based on the Jerry L. Johns Basic Reading Inventory (Johns BRI) annual assessment as well as Georgia ELA Milestones assessment. This statistic likely holds true for students who are DHH in grades K-12 across the state as the majority of students who are DHH are not reading on grade level in grade 3 as evidenced by four years of Georgia ELA Milestones reading proficiency category scores (see graph on page 1 of this document) and the graph below which illustrates that only 9% of Georgia students who are DHH are educated at the State Schools.



*Source: *Source: 2018. Georgia PINES, Georgia Department of Education, for Preschool - 12th Grade. Children enrolled with primary eligibility of Deaf or hard of hearing.
AASD = Atlanta Area School for the Deaf, GSD = Georgia School for the Deaf

State Schools leadership and the district level Data Manager/Assessment Director reviewed various data points (local benchmark assessment scores, Georgia Milestones data, and CCPRI

data) to identify overarching system goals. After an in-depth data analysis, one goal is to increase the percentage of students identified as proficient in ELA on the Georgia Milestones Assessment by 10% as evidenced by state assessment scores of 5th grade, 8th grade, and all ELA end-of-course high school students. The Comprehensive Needs Assessment and Root Cause Analysis highlighted several key areas that impact the ability to effectively support students with sensory impairments. The primary needs include developing and instituting a cohesive ELA curriculum as well as building leader and teacher capacity around effective literacy teaching practices. There is also a continued need for teachers to obtain instructional support and feedback from administration and instructional support staff that they can use to improve the quality of their instruction. To support the State Schools with meeting the system goal of increasing the number of students identified as proficient on the Georgia Milestones Assessment, the District Plan of Support includes providing professional learning on two evidence-based literacy curriculums specifically designed for students who are DHH, *Foundations for Literacy* and *Fingerspelling Our Way to Reading*. The State Schools were just awarded a school improvement grant by the GaDOE to implement the aforementioned interventions and support at the school level.



Source: GA Department of Education, Georgia PINES SKI HF Enrollment as of June 2019 & 2017-18 Georgia Department of Education Student Record Data Collection System: Deaf and hard of hearing Student Counts and Demographics, System Level by Primary Area and Grade Level for PK – 12th Grade
*Online Charter Schools includes Georgia Connections Academy & Georgia Cyber Academy

Additionally, the State Schools Data Manager/Assessment Director will work in tandem with local school personnel to ensure assessment data is collected, analyzed, shared, and acted upon as teachers will use the data to inform instructional decision-making. Finally, all instructional and support staff will attend a 2-day professional learning institute focused on ELA/Literacy across all content areas. As beneficial this work is to the students attending the State Schools, the work cannot positively move the student achievement needle on Georgia’s DHH reading outcomes if these resources cannot be replicated on a statewide basis as part of the aforementioned ecosystem (e.g., professional learning, evidence-based instructional materials, and supports provided to the LEAs who are serving the majority of students who are DHH in Georgia). Further complicating the issue is the low incidence of the DHH student population as only four LEAs in Georgia have more than 100 students who are DHH (please see image on previous page). Hence the urgent need to expand the benefits of this grant to DHH students statewide through the State Schools.

An oft-cited national study conducted in 2000 indicated that the median reading level (as determined by SAT reading comprehension scores) of DHH high school students was around the fourth grade level.¹ This excerpt from an interview with Dr. Mark Marschark, director of the Center for Education Research Partnerships at the National Technical Institute for the Deaf (NTID), explains the importance of identifying the need for K-12 education practices, “There is no good spin to median reading at the fourth-grade level (except for the fact that 50% of kids are reading above that level). Rather, this has to do with, at a minimum, K-12 education and the fact that deaf kids (regardless of school placement) are not getting the cognitive tools necessary to benefit from either the written word or the signed word (let alone the spoken word that they don't get with good fidelity).”² Similar findings are seen in more recent studies where the mean reading grade level (as determined by the PIAT-R) was 5.9 for Deaf participants and 9.8 for hearing participants.³ These national data, coupled with findings in Georgia, suggest that students who are DHH are at high risk for low reading levels. Because 91% of Georgia students who are DHH are educated in LEAs that may not have the resources and expertise to meet their unique learning needs, the State Schools must act to share their resources and knowledge with the entire DHH student population in Georgia. This grant takes outreach support work to the next level as it will financially allow the State Schools to address systemic root causes that until now were financially unfeasible to address in a statewide manner.

Assets: Georgia Pathway to Language and Literacy (Pathway) is a state-wide coalition created in 2011 through the joint efforts of Comer Yates, Executive Director of the Atlanta Speech School and Dr. Kenney Moore, Director of the GaDOE Division of State Schools. The goal of Pathway mirrors that of the Get Georgia Reading Campaign by ensuring that all children who are DHH will be on a path to reading proficiency in the 3rd grade by 2020. Pathway includes 90+ statewide stakeholders including the Department of Public Health (DPH), DECAL, the GaDOE,

¹ Traxler, C. (2000). The Stanford Achievement Test, 9th Edition: National norming and performance standards for Deaf and hard-of-hearing student, *The Journal of Deaf Studies and Deaf Education*, 5(4), 337–348.

² Seaver, Leanne. (2005). An interview with Marc Marschark, PhD., Director of the Center for Education Research Partnerships at the National Technical Institute for the Deaf (NTID) at RIT, Rochester, New York. http://www.handsandvoices.org/articles/research/v9-2_marschark.htm

³ McKee, M. M., Paasche-Orlow, M., Winters, P. C., Fiscella, K., Zazove, P., Sen, A., & Pearson, T. (2015). Assessing health literacy in Deaf American Sign Language users, *Journal of Health Communication*, 20(2), 92–100

GTA, the SBOE, the Atlanta Speech School, private and public medical professionals (e.g., ENTs, audiologists, and pediatricians), teachers (e.g., regular education and special education), Georgia State University, Valdosta State University, Georgia Lions Lighthouse Foundation (GLLF), Georgia Hands and Voices, Let Georgia Hear, 20/20 Hearing, the Jason Cunningham Charitable Foundation, the Atlanta Speech School/Grady Access to Language (AtL) project, and many other community partners. With the support of the Atlanta Speech School, the GaDOE, and the SBOE, Dr. Kenney Moore was able to create a full-time language and literacy initiative coordinator position at the GaDOE to support the sustainability of Pathway and the legislative work related to OCGA §30-1-5 (amended by Act 462 in May of 2018).

As a direct result of the partnerships within the Pathway coalition and with the Georgia Commission for the Deaf and Hard of Hearing (GCDHH), a group of Georgia stakeholders facilitated the development/passage of legislation related to state accountability for the language and literacy outcomes of all children who are DHH in Georgia – Act 462 which amended OCGA §30-1-5. This legislation includes the expansion of the GCDHH, the creation of a state-level Multiagency Task Force and a statewide stakeholder advisory committee, the development of an annual report on early intervention and school-age service provision (including administering, and collecting and analyzing language and literacy assessments for DHH children) to be shared with the Governor’s Office, the General Assembly, and the public through the GCDHH website. Please see the full Year 1 Annual report at <https://dhs.georgia.gov/organization/about/language-access/georgia-commission-deaf-or-hard-hearing>.

Act 462 Deliverables Required in the Law:

1. Leverage the Georgia Testing Identifier (GTID) process
2. Create web and print based parent/professional resources
3. Create a list of age appropriate developmental milestones for DHH children/students
4. Develop and Implement an Individualized Child Report (Birth to Literacy Plan) for all DHH children and students
5. Establish interagency collaboration, provision of seamless services, and data sharing from birth through high school graduation across multiple state agencies to support DHH children and students
6. Create an annual legislative report to be published by September 15th of each year

Data Evaluation

Data evaluation will be used to inform change at the ecosystem level as well as create individualized birth to literacy plans to ensure all children who are DHH are meeting their maximum language and literacy potential. The individualized birth to literacy plans are intended to support a student’s Individualized Education Program (IEP) plan. Act 462 outlines other specific deliverables necessary to support a statewide ecosystem. Specific assessment tools to evaluate the efficacy of the DHH ecosystem will be determined through interagency collaboration (i.e., the OCGA §30-1-5 Multiagency Task Force including DPH, GaDOE, DECAL, GCDHH, SBOE, etc.,) with guidance from the OCGA §30-1-5 stakeholder advisory committee.

The Georgia Pathway to Language and Literacy (Pathway) coalition currently targets public health, early childhood, and school-age programs that provide the foundation and ongoing support for language development and on-grade-level reading. Pathway's expansion into school-age services (PreK to 3rd grade) has been particularly successful in providing teachers of students who are DHH with evidence-based professional development in language, literacy, and social-emotional development. In addition to the continuation of current teacher trainings, new partnerships with DECAL are providing the springboard for the development and implementation of a new training for early childcare providers and preschool teachers in a variety of settings. All teacher trainings currently implemented are supported by the GaDOE Division of State Schools Statewide Outreach Program with the intention to leverage the Cox Campus platform for ongoing supports statewide. Additional P-12 professional learning opportunities in the areas of social-emotional development (e.g., Theory of Mind), language development (e.g., Fundamentals of Listening and Spoken Language), visual decoding strategies (e.g., Visual Phonics), and bilingual (ASL/English) instruction (e.g., Bedrock Literacy and Fairview Literacy Program for the Deaf) will be available.

Georgia Parent Infant Network for Educational Services (PINES) Evaluation

An intensive audit of Georgia PINES services was completed in August of 2017. The current director of Georgia PINES and administrative staff at the GaDOE and DPH (Babies Can't Wait) are working to implement evaluation report recommendations.

Foundations for Literacy (FfL)

With support from the GaDOE, this project continues to reach more teachers across the state of Georgia. This project increases access for children who are DHH to rigorous, evidenced-based educational materials and instruction through ongoing teacher training and collaboration. Evidence was gathered from the largest national randomized control trial in the history of Deaf Education in the 2016-17 school year.

Theory of Mind Intervention (ToM)

This is an evidenced-based intervention that supports the development of fundamental social-emotional and metacognitive thinking skills of DHH children in preschool and kindergarten. *Fingerspelling Our Way to Reading (FOWR)*. This is an evidence-based literacy intervention for DHH students Kindergarten through 2nd grade who use ASL and who do not have functional speech or functional hearing. This intervention provides an alternative literacy strategy for spoken phonology (i.e., fingerspelling) for students who cannot access letter-sound correspondence. Evidence was gathered from a national randomized control trial in the 2017-18 school year.

Parent Advocacy Training for families with children who are DHH

The Georgia Chapter of Hands and Voices is supporting free, statewide advocacy trainings for families with school-age DHH students through the ASTra Parent Advocacy initiative.

Listening and Spoken Language Trainings

Most of Georgia's children who are DHH use amplification to support their language and literacy development. Specific training is needed to support use of these listening devices and to maximize their effectiveness, especially since technology for hearing devices is constantly being updated and changed. Currently, the professional learning community for [Hearing First](#) offers an 18-month, 120 CEU hours through a course called *Fundamentals of Listening and Spoken Language* that allows teachers to take 10-hour portions of the course as needed for their professional learning and at times that work with their schedule. Hearing First has offered to partner with the GaDOE to provide additional resources for coaching, state-specific professional learning communities, and mentoring once a cohort of teachers is established.

Georgia Mobile Audiology Program

The Georgia Legislature and Governor's Office approved the State Schools to procure a mobile audiology van and staff it with two pediatric audiologists, one family engagement coordinator, and a program director to provide audiological services to pediatric clients in rural areas statewide.

Georgia Lions Lighthouse Foundation (GLLF)

A Pathway/GCDHH workgroup supported the successful renegotiation of a multi-year state-level contract to provide increased funding to GLLF (a nonprofit that provides hearing aids, BAHAs, and audiological care to families in need) in an effort to expand coverage to rural areas, increase the number of families served, and decrease copays to ensure access for more families who are economically disadvantaged.

Medical Community Professional Development

This committee, while in the early stages of its work, focuses on the increased availability of DHH specific professional learning through online, CEU-approved webinars that present the information required for appropriate audiology care for young children. Members include professionals from Children's Healthcare of Atlanta (CHOA), Pediatric Ear, Nose, and Throat of Atlanta (PENTA), the GCDHH, the Georgia Academy of Audiologists, and GLLF. Additional recruitment for pediatricians and ENTs is forthcoming.

Georgia Center for the Deaf and Hard of Hearing (GCDHH)

A 501(c)(3) nonprofit that serves Deaf, Hard of Hearing, and DeafBlind individuals across the State of Georgia. GCDHH works with public and private community partners to advance the outcomes of the Deaf, Hard of Hearing, and DeafBlind community of Georgia. GCDHH serves individuals across the lifespan including programs for community services, employment services, interpreting services, equipment distribution, and youth and children's services.

Cox Campus at the Rollins Center – Atlanta Speech School

Cox Campus, a free and universally accessible online learning platform, provides an experience for parents/caregivers and professionals to learn through video based courses how to create and foster an ecosystem for constructing the brain for reading and all learning, collaborate with experts and peers, and find all the resources needed to put what is learned into practice immediately.

Section 4: Project Goals, Objectives, Activities, Outputs, Outcomes, and Supports Needed

Deliverable – What?	Who, How, and When?	Aligned with Best Practices
<p>1. Statewide Language and Literacy Assessor Trainings (including training for data entry) for test administration for children who are DHH (0-8 years)</p>	<p>Who? The OCGA §30-1-5 Stakeholder Advisory Committee, the Georgia Commission for the Deaf and Hard of Hearing (GCDHH), and the GaDOE Division of State Schools will develop a list of approved assessments for language (Spoken English, Spoken Spanish/home language (0-3 only), and ASL) and for literacy (3-8 years). An assessment survey has been created for LEAs to complete to determine the assessments already in use across the state as well current data collection and reporting procedures, and typical administration schedules. This survey will be used as a guiding document during the assessment selection process.</p> <p>How? The GaDOE Division of State Schools will recruit and train a group of 6 regional assessors to administer the language and literacy assessments across the state. Assessors may be contract workers or current school personnel in LEAs. Assessors will receive a list of students to evaluate as well as an assessment schedule and location. Required language and literacy assessments commence upon the enrollment into public early intervention and public school services. (Please see pg. 47, lines 227 to 233 of OCGA §30-1-5 for details.) In addition, Georgia PINES will embed assessments into their required biannual assessment procedures during the 0-3 early intervention service period along with the DPH’s Babies Can’t Wait early intervention program. While the law requires assessments from birth to 3rd grade, it is clear that many older students who are DHH are functioning well below grade level and would also benefit from receiving biannual language and literacy assessments, thus assessment training is open to all educational professionals serving students who are DHH kindergarten through 12th grade.</p> <p>When? The Assessment Survey may be sent to LEAs immediately. Once responses are reviewed by the OCGA §30-1-5 Stakeholder Advisory Committee, recruitment for assessors may begin. The assessment training content development may start once assessments are determined. Tentative plans are to roll out assessment administration based on population density maps of DHH students (see pg. 7 of this grant application).</p>	<p>Educational decisions should be driven by individual child data as well as EBPs. At this time there are relatively few standardized ASL assessments and the current spoken language assessments may need administration modifications for children who use a combination of signed and spoken languages. Additionally, most school districts are not measuring their DHH students’ language growth from year to year even though the field knows language fluency is inextricably tied to literacy proficiency. Educators cannot make informed instructional decisions if they are not regularly evaluating students with appropriate assessments. Georgia make informed decisions for the DHH student population without credible data.</p>
<p>2. Limited Term audiologist position;</p>	<p>Who? The Georgia Mobile Audiology Program with the help of one limited term pediatric audiologist will target and address the backlog of testing that is currently preventing the state from accurately identifying children with hearing loss and</p>	<p>The CDC, Early Hearing Detection and Intervention (EHDI), and the Joint Committee on Infant Hearing (JCIH) recommend that infants be</p>

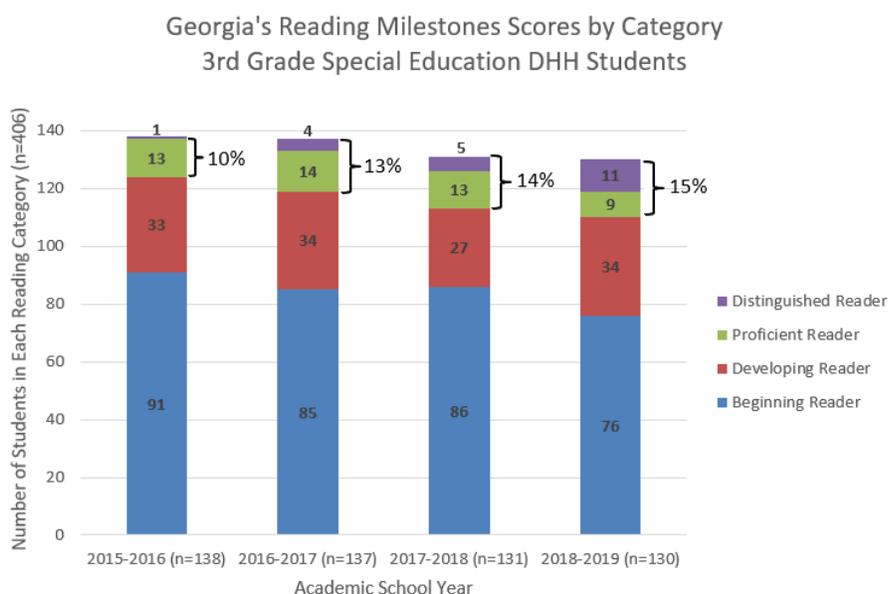
<p>professional learning for licensed audiologists serving pediatric clients with a focus on diagnostic testing and rescreening (0-21 years of age)</p>	<p>providing services for those children in a timely manner. Currently, the number of children in the diagnostic testing backlog is 212 with approximately 3000 awaiting rescreenings. The limited term audiologist(s) along with the current Mobile Audiology Program audiologists will address this backlog, create professional learning content for pediatric diagnostic examinations, and train and coach alongside local audiologists to build capacity. They will work with the American Academy of Audiology to ensure the training is approved for CEUs.</p> <p>How? The Georgia Mobile Audiology Program will use their mobile unit to provide direct services to families and children to address the backlog and deliver in-person coaching and training across the state at private clinics/hospitals, open workshops, and county health dept clinics.</p> <p>When? The Georgia Mobile Audiology Program van is scheduled for delivery in March 2020. However, since the Summer of 2019, the program has taken steps to acquire portable equipment to begin testing the backlog and completed needs assessments and regional visits to develop local partnerships. The professional learning content development can commence immediately. Once professional learning content is created, the Georgia Mobile Audiology Program will target initial roll out of the professional learning to areas in Georgia with the greatest need (e.g., areas where there are no audiologists trained to provide pediatric diagnostic exams).</p>	<p>screened for hearing loss before one month of age, diagnosed with hearing loss before three months of age, and enrolled in early intervention before six months of age. This is known as the 1-3-6 benchmark. Currently majority of children who are DHH are not meeting the 3- or the 6-month benchmarks. Delays in getting a diagnostic exam by 3 months of age result in delays in enrolling in early intervention service by 6 months. The positive benefits of early intervention on later academic achievement are well documented.</p>
<p>3. Professional Learning and Ongoing Coaching for: (1) Childcare Providers (0-5 years), (2) Early Interventionists (0-3 years), and (3) Preschool Teachers (3-5 years) serving children who are DHH</p>	<p>Who? Stakeholders from Pathway, OCGA §30-1-5 Multiagency Taskforce, DECAL, and GaDOE Division of State Schools will create three professional learning courses on the Cox Campus for professionals working with young children who are DHH as well as universal training in identification procedures (i.e., how to refer children for screening and diagnostic evaluations) and language nutrition. The Cox Campus courses will include: (1) universal training in identification procedures (i.e., signs of hearing loss and next steps for caregivers and professionals related to follow-up screening and diagnostic evaluations), (2) universal strategies that support language nutrition and early brain development, and (3) DHH-specific strategies for supporting language and learning for children who are DHH 0-5 years of age. DECAL will ensure that professional learning will be approved for awarding state credit to hours to meet childcare licensing requirements and DECAL will explore ways to have the training reflected in the Quality Rated application process.</p> <p>How? The GaDOE Division of State Schools Statewide Outreach Program within GaDOE will work with local LEAs with SPED Preschool classrooms to roll out the professional learning across the state. DECAL will support professional learning workshops through recruitment and will provide training locations. Georgia PINES</p>	<p>The positive benefits of timely and appropriate early intervention to later academic achievement is well documented. In one of the most oft-cited projects, The Carolina Abecedarian Project, children in the experimental group received full-time, high-quality educational intervention in a childcare setting birth to age 5. Each child had an individualized prescription of educational play. These activities focused on social, emotional, and cognitive areas of development but gave particular emphasis to language (which is known challenge for children who are DHH). Researchers monitored children's progress over time with follow-up studies conducted at ages 12, 15, 21, 30, and 35. The Abecedarian Project findings continue to demonstrate that</p>

	<p>will embed the professional learning in their summer institute for all new early intervention specialists (EISs) and Deaf Mentors (DMs) working with children who are DHH and will roll out training for current EISs and DMs through remote and in-person opportunities. Again, Cox Campus will be leveraged for ongoing tele-coaching, tele-training, and other tele-home visiting services.</p> <p>When? Development of professional learning content may be started immediately. Once professional learning development is complete, recruitment and training of providers will commence.</p>	<p>important, long-lasting benefits are associated with the high-quality early childhood program.</p>
<p>4. Professional Learning and Coaching for current SPED Preschool Teachers, School age Teachers (K-12), and GSU Deaf Education Student Teachers in <i>FfL</i> and <i>FOWR</i> and other language and literacy interventions and curricula</p>	<p>Who? The Center on Literacy and Deafness (CLAD) housed at Georgia State University has already completed the teacher training, train the trainer, and coaching models as well as instructional materials for <i>FfL</i> and <i>FOWR</i>. The Georgia Division of State Schools will support the recruitment and training of a cadre of statewide trainers for each evidence-based intervention. Cox Campus will be leveraged to provide ongoing teacher coaching across the state.</p> <p>How? Currently there is a single trainer for each intervention in Georgia. These trainers cannot meet the demand for training and coaching alone. Both trainers are employed at the GaDOE and they will work with the intervention authors to oversee a train-the-trainer program. A GaDOE annual state-wide training will be provided at the Institute Designed for Educating ALL Students (IDEAS) DHH Preconference, as well as regionals trainings supported by LEAs, RESAs, GLRSs, and Regional DHH Consortiums. Once teachers have completed a full intervention training (i.e., Foundations is a 2-day training, and Fingerspelling is a 1-day training), teachers will be eligible for free curriculum materials. Additional Professional Learning opportunities in social emotional development (i.e., Theory of Mind - ToM), visual decoding strategies (i.e., Visual Phonics), language development (i.e., Fundamentals of Listening and Spoken Language), and bilingual (ASL/English) instruction (i.e., Bedrock Literacy and Fairview Literacy Program for the Deaf) will also be provided.</p> <p>When? The work of training teachers is already in progress, however a single trainer for each intervention cannot meet the statewide demand (statewide DHH student population equals 2, 326 across 125 (out of 158) counties) for initial training, follow-up coaching, and data collection (i.e., curriculum-based measures – intervention progress monitoring). The recruitment of teachers to apply to the train-the-trainer program may commence immediately. Preparation for teacher preparation program students may commence immediately.</p>	<p>Both interventions were evaluated using rigorous research methods and have proved to be evidence-based interventions. <i>FfL</i> has nine published data-driven articles and the largest national Randomized Control Trial (RCT) in the history of Deaf Education was completed in the 2016-17 school year. This RCT is in the process of being published now. Components of the <i>FOWR</i> intervention were shown to be effective in a large national study that examined DHH students reading abilities and a smaller national RCT was completed in the 2017-18 school year that included a new reading comprehension component. Both original and new components were shown to be more effective than control group instruction.</p>

Section 1: LEA-Partnership Narrative

The Get Georgia Reading Campaign has a goal of ensuring all children in the state are on a path to reading proficiently by the end of third grade by 2020.¹ Research shows that children who do not read proficiently by the end of third grade are more likely to drop out of high school, experience poor health, have discipline problems, perform poorly in eighth grade math, and become teen parents.² Eighty-five percent of juvenile offenders have reading challenges, and three out of five adults in the United States' prisons are illiterate.³

Today in Georgia, only 42% of all students are reading proficiently by the end of third grade.⁴ While this is an encouraging increase from the previous school year, the same growth has not been realized for Georgia students who are Deaf and Hard of Hearing (DHH). For the past four academic school years (2015-16 to 2018-19), only 15% or less of children with a primary Special Education (SPED) eligibility of DHH achieved reading proficiency by the end of third grade.⁵ The link between language usage and reading proficiency is well documented in research literature. Students who are DHH often struggle with foundational language and vocabulary skills and subsequent literacy proficiency as many enter school with significant language delays because of a lack of full access to early language environments.⁶ For these children who are DHH, language and literacy outcomes are nothing short of a statewide crisis.



¹ Reference <http://getgeorgiareading.org/framework-overview/> & <http://getgeorgiareading.org/cabinet/gov-brian-kemp/> for more information

² <http://getgeorgiareading.org/framework-overview/>

³ <https://www.literacyprojectfoundation.org>

⁴ Georgia Department of Education, *Grade 3 Milestones End of Grade English Language Arts Assessments for Deaf and Hard of Hearing Students Receiving Special Education*. School Year 2018-19 Milestones End of Grade Assessments.

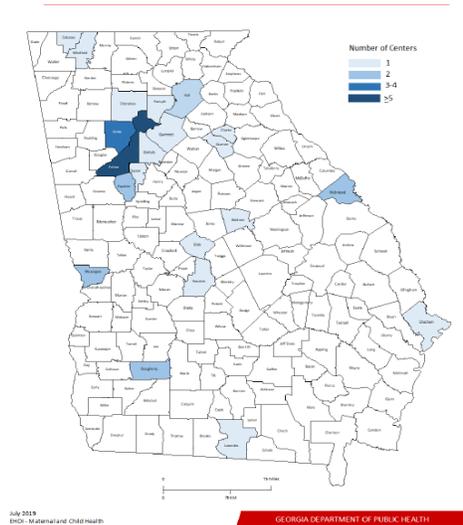
⁵ Georgia Department of Education, *Grade 3 Milestones End of Grade English Language Arts Assessments for Deaf and Hard of Hearing Students Receiving Special Education*. School Years 2015-16, 2016-17, 2017-18, 2018-19 Milestones End of Grade Assessments. Total number of third graders tested was 406 with 70 testing at or above grade level and 336 testing below grade level.

⁶ Marschark, M., Shaver, D., Nagle, K., & Newman, L. A., (2015). Predicting the academic achievement of deaf and hard-of-hearing students from individual, household, communication, and educational factors, *Exceptional Children*, 81(3), 350-369.

Georgia’s children who are DHH often have the ability to achieve every educational outcome that children with typical hearing can achieve especially if auditory access to learning and utilizing language are the only barriers that prevent children who are DHH from making academic gains. DHH children have the right to appropriate literacy supports and interventions to help them achieve reading proficiency to the greatest extent possible.

Access to early diagnosis and appropriate early intervention services are prerequisites for later academic achievement. Only 32% of the babies identified as needing a full diagnostic hearing exam (i.e., Auditory Brainstem Response, ABR) were reported to have received the exam by three months of age.⁷ There is currently a known statewide backlog of 212 children awaiting a diagnostic exam and approximately 3,000 children pending follow-up rescreens.⁸ If children do not receive the diagnostic exam by 3 months of age (when the baby is capable of the natural deep sleep needed for the diagnostic exam), it is recommended that the babies are sedated to complete the diagnostic exam. Sedation acts as a deterrent for many parents seeking a timely diagnosis. Without a diagnosis of hearing loss, children who are DHH cannot access public or private audiological care or early intervention services. Furthermore, only 41% of babies born in 2017 and diagnosed as DHH received a home visit from an early intervention specialist by six months of age.⁹ National studies have documented that children who are DHH who do not receive early intervention have inferior language and literacy outcomes than children who do receive early intervention.¹⁰ These state data evidence the delay in Georgia’s DHH children’s access to evidenced-based early learning supports and interventions that adversely affect DHH children’s academic outcomes.

Hearing Diagnostic Centers



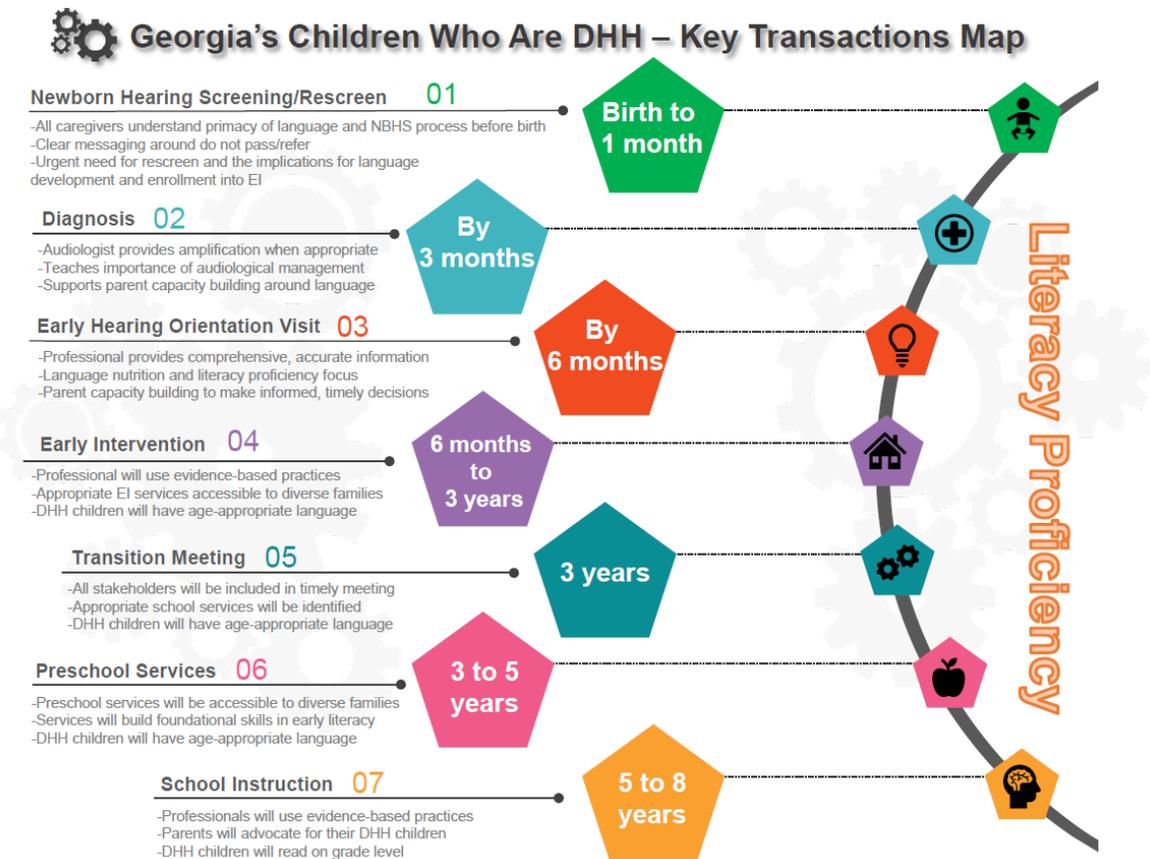
⁷ State Electronic Notifiable Disease Surveillance System (SendSS) for newborn hearing screening/rescreen, diagnosis, and EHOS visit data

⁸ Georgia Department of Public Health; Early Hearing Detection and Intervention Program (EHDI) data, January 2019.

⁹ Babies Information and Billing Services (BIBS) repository for Part C early intervention enrollment data

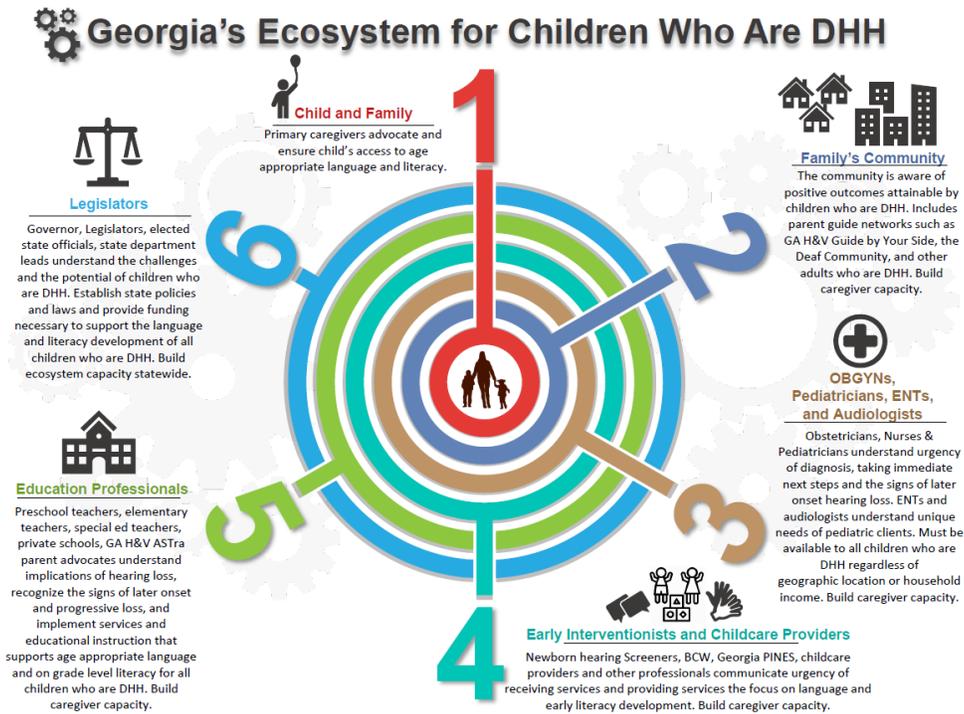
¹⁰ Yoshinaga-Itano, C.; Sedey, A.; Coulter, D.; & Mehl, A (1998). Language of early and later-identified children with hearing loss, Pediatrics. 102 (5) 1161-1171

In order to meet the needs of the DHH student population, Georgia must support the deliverables of OCGA §30-1-5 (amended by Act 462 in May of 2018) which include the creation of an individualized, *child-focused* ecosystem that supports a seamless provision of services for children and families as they move through the *seven key transactions necessary to attain age appropriate language and literacy outcomes*. This requires a radical change in adult behavior as it relates to supporting a *sustainable, statewide ecosystem of caregivers and professionals* responsible for the individual language and literacy outcomes for each child who is DHH in Georgia. The Georgia Department of Education (GaDOE) Division of State Schools will serve as the local education agency for the purposes of this grant; however the deliverables of the grant will be available to all parents/caregivers and professionals statewide who are raising and serving children who are DHH birth to graduation so as to create an ecosystem of supports and interventions for DHH children.



OCGA §30-1-5 established a Multiagency Task Force to promote transparency, require data sharing, and support ongoing collaboration in order to improve language and literacy outcomes for all children who are DHH in Georgia. The Multiagency Task Force consolidated thought leaders from the Department of Public Health (DPH), the GaDOE, the Department of Early Care and Learning (DECAL), the State Board of Education (SBOE), the Georgia Technology Authority

(GTA), the Atlanta Speech School, and the Georgia Pathway to Language and Literacy Coalition, as well as data from six different agency databases.



OCGA §30-1-5 requires all children who are DHH must receive biannual language assessments beginning at the time of enrollment into public early intervention services through 3rd grade and biannual literacy assessments beginning at the time of enrollment into public school services preschool through 3rd grade. The assessment requirements have not yet started as the OCGA §30-1-5 Stakeholder Advisory Committee is currently developing a list of language and literacy assessments appropriate for children who are DHH including assessments for Spoken English, Spoken Spanish (or other home language), and American Sign Language (ASL) including the distribution of a Special Education Director Survey to gauge the assessments and administration schedules currently in use by Local Education Agencies (LEAs) across the state. While the law requires assessments from birth to 3rd grade, it is clear that many older students who are DHH are functioning well below grade level and would also benefit from receiving biannual language and literacy assessments, thus assessment training is open to all educational professionals serving students who are DHH kindergarten through 12th grade.

Deliverables

Deliverable #1: This grant will address the need for statewide assessor trainings and assessment administration, a statewide lending library for assessment materials to be housed within the GaDOE Division of State Schools, as well as data collection and data entry trainings for assessors. Without data related to language and literacy development, Georgia cannot

identify and implement specific solutions to increase the literacy proficiency of DHH children (birth to 5 years of age) and school age students (P-12). Assessment data will be housed in the GaDOE's Statewide Longitudinal Data System (SLDS) and analyzed by members from the Multiagency Taskforce as defined by OCGA §30-1-5.

Diagnostic Evaluations, Follow Up Audiological Care, and Enrollment into Early Intervention

Serving the DHH population can be challenging given its low incidence (i.e., the number of reported incidences of hearing loss in comparison to the general population) that is compounded by smaller populations outside of major metro areas and significant socioeconomic barriers. However, research clearly shows that children who are DHH who have been identified in early infancy, enrolled in early intervention by six months, and who have received appropriate, ongoing early intervention services will be on a path to academic success in the school age years.¹¹

Deliverable #2: This grant will address the need for an increased capacity in statewide rescreening and diagnostic evaluation services by providing professional learning and coaching for licensed audiologists providing audiological care for the pediatric population. Additionally, the grant will provide funding for a limited term (i.e., three years) pediatric audiologist position to address the significant backlog of diagnostic exams and follow-up hearing screenings.

Early Intervention, Early Childcare, and Preschool Programs (Birth to 5 Years of Age)

Recent developmental studies suggest children's early learning is complex and multifaceted. Young children rely on a form of implicit learning that occurs as children interact with the world and acquire the language used in their culture (including ASL and spoken languages other than English).¹² This learning from exposure to language requires social settings and social interactions with other human beings.¹³ This is especially important for children who are DHH as more than 95% of children in this population are born to speaking and hearing parents, but because of their hearing losses, DHH children's access to spoken language is limited. Research shows that it is rare that hearing parents are fluent in a signed language (e.g., ASL) at the time of a child's birth.¹⁴ In fact, many hearing parents do not attain an ASL proficiency level that is conducive to appropriately communicate with their child in their child's natural language of ASL. As 85% of a child's brain development occurs by age five and optimal neural development is dependent on access to language and social interactions, appropriate and accessible professional learning opportunities for Georgia's early interventionists, early childcare providers, and preschool education professionals regarding language acquisition and support for DHH children are a necessity if Georgia is to optimize outcomes during this critical developmental window.¹⁵

¹¹ Moeller, M.P. (2000). Early intervention and language development in children who are deaf and hard of hearing. *Pediatrics*, 106(3), E43. (here's the abstract: <https://www.ncbi.nlm.nih.gov/pubmed/10969127>)

¹² Kuhl, P. (2011). Early language learning and literacy: Neuroscience implications for education. *Mind Brain Education*, 5(3), 128-142.

¹³ Kuhl, P. (2011). Early language learning and literacy: Neuroscience implications for education. *Mind Brain Education*, 5(3), 128-142.

¹⁴ Marschark, M., Shaver, D., Nagle, K., & Newman, L.A. (2015). Predicting the academic achievement of deaf and hard-of-hearing students from individual, household, communication, and educational factors, *Exceptional Children*, 81(3), 350-369.

¹⁵ Georgia Early Education Alliance for Ready Students. <http://geears.org/wp-content/uploads/2011/05/GEEARSFactSheet.pdf>

Deliverable #3: This grant will address the need for professional learning and ongoing coaching for those individuals working with young children who are DHH (birth to 5 years of age). Three online professional learning courses as well as ongoing coaching will be made available at no charge to participants through The Cox Campus, an online professional learning community housed within the Rollins Center at the Atlanta Speech School. The Cox Campus will provide a platform for sustainable statewide professional learning and remote coaching through synchronous and asynchronous methods. The Cox Campus courses will include: (1) universal training in identification procedures (i.e., signs of hearing loss and next steps for caregivers and professionals related to follow-up screening and diagnostic evaluations); (2) universal strategies that support language nutrition and early brain development; and (3) DHH-specific strategies for supporting language and learning for children who are DHH 0-5 years of age. Course content will be developed through a coordinated effort with DECAL and public and private early childcare providers. Professional learning will be approved for awarding state credit towards hours needed to meet childcare licensing requirements, and DECAL will explore ways to have the training reflected in the Quality Rated application process. The Georgia Parent Infant Network for Educational Services (Georgia PINES) will provide professional learning that will be tied to the SKIHI program and the Deaf Mentor Program. The GaDOE Division of State Schools will include statewide outreach for all LEAs serving DHH preschool students. This will increase the literacy proficiency of Georgia’s DHH children and students from birth through 12th grade.

School-Age Programs (P-12)

Academic challenges for children who are DHH do not end when they reach school age. In fact, these challenges become significantly more difficult to address as children progress through their school career as there are few instructional practices, interventions, or curricula that are evidence-based for students who are DHH. In fact, there are only two evidence-based literacy interventions designed specifically for students who are DHH: (1) *Foundations for Literacy (FfL)*, an early literacy curriculum for children who are DHH aged 3 to 7 years (and older if used as remediation) who use spoken English, ASL, or any combination of the two (e.g., sign-supported speech), and (2) *Fingerspelling Our way to Reading (FOWR)*, a later literacy intervention for children who are DHH in K through 2nd grade (and older if used as remediation) who use ASL or sign-supported speech. Additional P-12 professional learning opportunities in the areas of social-emotional development (e.g., Theory of Mind), spoken language development (e.g., Fundamentals of Listening and Spoken Language), visual decoding strategies (e.g., Visual Phonics), and bilingual (ASL/English) instruction (e.g., Bedrock Literacy and Fairview Literacy Program for the Deaf) will be available.

Deliverable #4: This grant will address the need for professional learning in the two evidence-based interventions in Deaf Education (i.e., *FfL and FOWR*) as well as other DHH-focused strategies, interventions, and curricula for all Georgia teachers and educational professionals (e.g., paraprofessionals, Speech Language Pathologists, Educational Interpreters, etc.) serving students who are DHH (P-12). In order to ensure the most comprehensive access, these

materials (e.g., universal instructional supports and intervention materials) and ongoing coaching (e.g., in-person and remote) must be available at no cost to teachers. The GaDOE Division of State Schools will support sustainable statewide professional learning and The Cox Campus will provide the platform for sustainable remote coaching through synchronous and asynchronous methods. Additionally, the implementation team leading this grant will work with Georgia State University's and Valdosta State University's Deaf Education Teacher Preparation Programs to embed training hours for each intervention into the degree programs to ensure future graduates will be trained to implement both evidence-based interventions when they enter the teaching profession. Additionally, there is need for a train-the-trainer model to build training and coaching capacity and sustainability for ongoing statewide professional learning, coaching, and data collection/analysis. This will increase the literacy proficiency of Georgia's children (birth to 5 years of age) and school aged students who are DHH (P-12).

Success is dependent upon equitable access to timely and appropriate hearing screenings, audiological care, early intervention and early childcare programs, and educational settings and professionals who use evidence-based interventions and instructional materials regardless of where a child may live. The components leading to success are part of the pillars of the Get Georgia Reading Campaign. Today, far too many children who are DHH are not proficient in language or literacy largely because of significant lack of access to appropriate and timely services. Therefore, children who are DHH are still experiencing epidemic levels of language and literacy delays which are untenable for this relatively small but high learning potential population. If Georgia commits to a radical change in adult behavior as it relates to supporting a sustainable, statewide ecosystem of caregivers and professionals responsible for the language and literacy outcomes for each child who is DHH, the state will move the needle in a positive direction regarding DHH students' reading proficiency. In fact, Georgia will be a leader in the nation in doing so.

Section 2: LEA-Partnership Management Plan and Key Personnel to be completed by LEA- Community Literacy TaskForce

The GaDOE Division of State Schools will be the fiscal agent for the grant and its implementation. The Division of State School's Federal Programs Coordinator will be responsible for grant administration. If grant funding is awarded, the Division of State Schools will have the human capital and fiscal ability to adequately administer the grant. There have been no financial audit findings for the Division of State Schools over the last three years. The Division of State Schools must follow all statewide procurement policies, procedures, protocols, requirements, regulations, and rules created/developed by the Statewide Accounting Office, Office of Planning and Budget, Department of Administrative Services, State Board of Education, and any federal entity that outlines controls for spending (e.g., Federal Department of Education). The grant will function as a statewide strategic plan as the work is not limited to a single school district/LEA. The work of the OCGA §30-1-5 through the Multiagency Task Force and all DHH ecosystem stakeholders is focused on a single student population, children who are DHH. These children are educated in LEAs across the state. On page 4 of this section (i.e., Section 2) is a table outlining the barriers to each key transaction in the DHH ecosystem as well as solutions, a timeline of progress, and the corresponding state data currently available for each transaction.

The key individuals involved in the L4GA grant are as follows:

1. Dr. Kenney Moore – State Schools Director of the Division of State Schools and Statewide DHH Outreach Program within the GaDOE
2. Jan Stevenson – Assistant State Schools Director of the Division of State Schools and Statewide DHH Outreach Program within the GaDOE
3. Dr. Cassandra Matthews – Literacy Specialist, Academic Officer, and Federal Programs Coordinator for the Division of State Schools within the GaDOE
4. Dr. Stacey Tucci – Literacy Specialist and Language and Literacy Initiative Program Manager for the Division of State Schools within the GaDOE
5. Vanessa Robisch – DHH Statewide Outreach Coordinator for the Division of State Schools within the GaDOE
6. Dr. Heidi Evans – Director of the Georgia Parent Infant Network Services for Early Intervention Program (PINES) for the Division of State Schools within the GaDOE
7. Dr. Jessica Bergeron – Literacy Specialist and Program Director of the Georgia Mobile Audiology Program for the Division of State Schools within the GaDOE
8. Dr. Melanie Carter – Pediatric Audiologist for the Georgia Mobile Audiology Program for the Division of State Schools within the GaDOE
9. Dr. Monica Patterson – Pediatric Audiologist for the Georgia Mobile Audiology Program for the Division of State Schools within the GaDOE

10. Stormey Cone – Family Engagement Coordinator for the Georgia Mobile Audiology Program for the Division of State Schools within the GaDOE
11. Comer Yates – Executive Director of the Atlanta Speech School including: the Rollins Center; Cox Campus; and Chair of the Georgia Commission for the Deaf and Hard of Hearing (GCDHH)
12. Jennifer Wolford – Director of the Rollins Center at the Atlanta Speech School (Cox Campus)
13. Dr. Judith Emerson – Clinical Associate Professor, Deaf Education Teacher Preparation, American Sign Language Course Coordinator, and edTPA Special Education Coordinator in the College of Education and Human Development at Georgia State University
14. Dr. Nanci Scheetz – Program Coordinator, Deaf Education and American Sign Language Interpreting Programs at Valdosta State University
15. Jennie Couture – Director of Practice and Support Services and Centers for Disease Control (CDC) Act Early Ambassador to Georgia within the DECAL
16. Denise Jensen – Quality Rated Operations Director within the DECAL
17. Lisa Buckner – Data Manager/Assessment Director for the Division of State Schools within the GaDOE

The grant will ensure services in the birth to 5 age range through the following:

1. Georgia PINES will provide DHH specific professional learning to early intervention professionals who serve children who are DHH statewide from birth to 3 years of age through the evidence based SKIHI curriculum and Deaf Mentor programs.
2. The Division of State Schools Statewide Outreach Program in conjunction with regional DHH Consortiums often supported by Regional Educational Service Agencies (RESAs) and local LEAs with Special Education Preschool Programs will provide professional learning to teachers serving DHH students in *Foundations for Literacy (FfL)* as well as universal strategies for language nutrition and identification of children with undiagnosed hearing loss (e.g., Theory of Mind, Fundamentals of Listening and Spoken Language, etc.).
3. DECAL will support DHH specific professional learning for early childcare providers (e.g., private providers, HeadStart, Babies Can't Wait (BCW), Georgia PreK, etc.,) and will assist with moving the professional learning through the state's approval process as well as coordinate delivery of the professional learning. Currently early childcare programs can get points in their Quality Rated (QR) portfolio by having a professional learning plan for each teacher and director (note: currently there are no specifics for what has to be in that plan) and may gain additional points when teachers have more than 10 state approved training hours (10 hours is the minimum). There are no specific trainings at this time that are linked to additional

points. However, the QR program is completing a major overhaul to the QR Portfolio in the next year and is willing to consider having specific professional learning to yield points.

4. The GaDOE Georgia Mobile Audiology Program will provide audiological services and family engagement services statewide to children who are DHH from birth to 21 years old and their families as well as professional learning for audiologists serving the pediatric population in rural and underserved areas in Georgia.
5. The Cox Campus at the Rollins Center at the Atlanta Speech School will provide online training and remote coaching for professionals and caregivers serving and raising children who are DHH birth to 5 years of age and school age (P-12) at no cost to participants.

Transactions and Optimal Age Range for Completion		Barriers	Solutions	Timeline	# of DHH Children NOT Meeting
	Newborn Hearing Screening and Rescreen ➤ Birth to 1 month	Hospital hearing screeners not trained in Talk With Me Baby (TWMB); hospitals' delayed reporting of failed hearing screen to DPH/EHDI program	All screeners will be trained in TWMB; Governor and local state senators/representatives will support enforcement of reporting requirements	Not started 	5113 of 130,006
	Diagnosis ➤ By 3 months	Testing backlog due to state's lack of provider capacity for diagnostic testing relative to annual DHH birthrate	Mobile Audiology Program will increase state's diagnostic capacity by providing mobile resources including diagnostic testing	In progress 	1056 of 1561 *Known diagnostic backlog = 200
	Early Hearing Orientation Visit ➤ By 6 months	Some parents experience delay in completing home visit; must wait up to 14 days to access next steps information	Develop web-based parent resource for instantaneous access to next steps for families with DHH children	In progress 	143 of 241
	Early Intervention ➤ 6 months to 3 years	Lack of continuity in EI services between DHH-specific EI services (PINES) and general EI services (BCW)	BCW will include PINES EI providers in all DHH intake meetings and throughout service delivery and transition	Not started 	78 of 250 (PINES) *no data from Babies Can't Wait
	Transition Meeting ➤ 3 years	Missing state data on transition meetings; BCW does not include PINES in transition planning or meeting consistently	Gather current data on transition planning and transition meetings from PINES and BCW; BCW to include PINES EI provider in transition planning and meeting	Not started 	*no data from Babies Can't Wait
	Preschool Services ➤ 3 years to 5 years	Preschool teachers need to implement evidence-based practices; cannot locate DHH children in early childcare centers	DECAL & DOE will create PL for preschool teachers/early childcare providers regarding identification of DHH children and use of evidence-based practices specific to DHH children	In progress 	-No preschool teachers trained (SPED Preschool counted below) *no DHH-specific data from DECAL
	School Instruction ➤ 5 years to 8 years	All teachers are not trained to implement evidence-based curriculums specifically designed for DHH students	DOE and LEAs to continue training GA teachers working with DHH students in 2 evidence-based DHH curriculums; roll out annual language and literacy assessments	In progress 	-20 of 130 reading on grade level in 3rd grade (2018-19) -200+ professionals trained

GA DOE STATE SCHOOLS BUDGET 2

#4 Mobile Audiology		Five Year Total	#4 Mobile Audiology		Five Year Total	#4 Mobile Audiology		Five Year Total	#4 Mobile Audiology		Five Year Total	#4 Mobile Audiology		Five Year Total
Year One	#000000		Year Two	#000000		Year Three	#000000		Year Four	#000000		Year Five	#000000	
Full Time Audiologist for Backlog	#000000		Full Time Audiologist for Backlog	#000000		Full Time Audiologist for Backlog	#000000		Full Time Audiologist for Backlog	#000000		Full Time Audiologist for Backlog	#000000	
Salary	\$75,000	Salary	Salary	\$75,000	Salary	Salary	\$75,000	Salary	Salary	\$75,000	Salary	Salary	\$75,000	Salary
Fringe Benefits	\$45,000	Full-Time Benefits @6%	Fringe Benefits	\$45,000	Full-Time Benefits @6%	Fringe Benefits	\$45,000	Full-Time Benefits @6%	Fringe Benefits	\$45,000	Full-Time Benefits @6%	Fringe Benefits	\$45,000	Full-Time Benefits @6%
Messaging Content Development	\$3,801	1 Developer at \$75/hr for 50 hours	Messaging Content Development	\$3,801	1 Developer at \$75/hr for 50 hours	Messaging Content Development	\$3,801	1 Developer at \$75/hr for 50 hours	Messaging Content Development	\$3,801	1 Developer at \$75/hr for 50 hours	Messaging Content Development	\$3,801	1 Developer at \$75/hr for 50 hours
&	\$3,750	\$75/hr x 50-Developer #1	&	\$3,750	\$75/hr x 50-Developer #1	&	\$3,750	\$75/hr x 50-Developer #1	&	\$3,750	\$75/hr x 50-Developer #1	&	\$3,750	\$75/hr x 50-Developer #1
Train Map Team on Content	\$51	1.35% on Hourly Pay-Developer #2	Train Map Team on Content	\$51	1.35% on Hourly Pay-Developer #2	Train Map Team on Content	\$51	1.35% on Hourly Pay-Developer #2	Train Map Team on Content	\$51	1.35% on Hourly Pay-Developer #2	Train Map Team on Content	\$51	1.35% on Hourly Pay-Developer #2
Deliver Messaging to state wide audiologist			Deliver Messaging to state wide audiologist			Deliver Messaging to state wide audiologist			Deliver Messaging to state wide audiologist			Deliver Messaging to state wide audiologist		
Messaging Brochures and Supplies	\$1,500	messaging brochures and supplies	Messaging Brochures and Supplies	\$1,500	messaging brochures and supplies	Messaging Brochures and Supplies	\$1,500	messaging brochures and supplies	Messaging Brochures and Supplies	\$1,500	messaging brochures and supplies	Messaging Brochures and Supplies	\$1,500	messaging brochures and supplies
Light Snacks for Meetings	\$180	six trainings at \$30 per training	Light Snacks for Meetings	\$180	six trainings at \$30 per training	Light Snacks for Meetings	\$180	six trainings at \$30 per training	Light Snacks for Meetings	\$180	six trainings at \$30 per training	Light Snacks for Meetings	\$180	six trainings at \$30 per training
Informational Video	\$8,000	Create Online Informational Video 1 x\$8,000												
YEAR ONE			YEAR TWO			YEAR THREE			YEAR FOUR			YEAR FIVE		
Reduce the backlog of children who have not had needed follow up services from a audiologist.			Reduce the backlog of children who have not had needed follow up services from a audiologist.			Reduce the backlog of children who have not had needed follow up services from a audiologist.			Reduce the backlog of children who have not had needed follow up services from a audiologist.			Reduce the backlog of children who have not had needed follow up services from a audiologist.		
Deliver clear and consistent messaging for educational audiologists, pediatric audiologists, and other audiologists working with school age children.			Deliver clear and consistent messaging for educational audiologist, pediatric audiologists, and other audiologists working with school age children.			Deliver clear and consistent messaging for educational audiologist, pediatric audiologists, and other audiologists working with school age children.			Deliver clear and consistent messaging for educational audiologist, pediatric audiologists, and other audiologists working with school age children.			Deliver clear and consistent messaging for educational audiologist, pediatric audiologists, and other audiologists working with school age children.		
												The Mobile Audiology Program will continue the work from this grant once it is at a manageable rate.		
Total Year One	#000000		Total Year Two	#000000		Total Year Three	#000000		Total Year Four	#000000		Total Year Five	#000000	

GADOE STATE SCHOOLS BUDGET 3

#3 PL Coaching for Providers (B-5), EIs and (B-3) and P5 Teachers (B-5)

Five Year Total
\$47,750

Year One	Amount	
Content Development	\$6,082	3 Developers at \$50/hr for 60 hours each
	\$3,000	\$50/hr x 60 Developer #1
	\$3,000	\$50/hr x 60 Developer #2
	\$41	1.35% on hourly pay- Developer #1
	\$41	1.35% on hourly pay- Developer #2
Tain the Primary Trainers	\$3,651	3 Primary Trainers at \$50/hr for 24 hours each
Hourly Pay	\$1,200	\$50/hr x 24- Primary Trainer #1
	\$1,200	\$50/hr x 24- Primary Trainer #2
	\$1,200	\$50/hr x 24- Primary Trainer #3
Fringe Benefits	\$17	1.35% on Hourly Pay- Primary Trainer #1
	\$17	1.35% on Hourly Pay- Primary Trainer #2
	\$17	1.35% on Hourly Pay- Primary Trainer #3
Travel and Lodging	\$1,770	Two Days/Nights per Trainer Per Diem
	\$590	Food/Lodging 2x5195- Primary Trainer #1
	\$590	Food/Lodging 2x5195- Primary Trainer #2
	\$590	Food/Lodging 2x5195- Primary Trainer #3
Develop the PL Plan/Train the Primary Trainers	\$200	Mileage- Primary Trainer #1
	\$200	Mileage- Primary Trainer #2
	\$200	Mileage- Primary Trainer #3
Interpreting and CART Services	\$2,480	Two interpreters at \$65/hour x 16 hours each
	\$1,040	\$65/hour x 8 hours- Interpreter #1
	\$1,040	\$65/hour x 8 hours- Interpreter #2
	\$200	Mileage- Interpreter #1
	\$200	Mileage- Interpreter #2
Tain the Trainers	\$3,651	3 Primary Trainers at \$50/hr for 24 hours each
Hourly Pay	\$1,200	\$50/hr x 24- Primary Trainer #1
	\$1,200	\$50/hr x 24- Primary Trainer #2
	\$1,200	\$50/hr x 24- Primary Trainer #3
Fringe Benefits	\$17	1.35% on Hourly Pay- Primary Trainer #1
	\$17	1.35% on Hourly Pay- Primary Trainer #2
	\$17	1.35% on Hourly Pay- Primary Trainer #3
Travel and Lodging	\$1,770	Two Days/Nights per Trainer Per Diem
	\$590	Food/Lodging 2x5195- Primary Trainer #1
	\$590	Food/Lodging 2x5195- Primary Trainer #2
	\$590	Food/Lodging 2x5195- Primary Trainer #3
Hourly Pay	\$6,576	6 Trainers at \$45/hr for 24 hours each
	\$1,080	\$45/hr x 24- Trainer #1
	\$1,080	\$45/hr x 24- Trainer #2
	\$1,080	\$45/hr x 24- Trainer #3
	\$1,080	\$45/hr x 24- Trainer #4
	\$1,080	\$45/hr x 24- Trainer #5
	\$1,080	\$45/hr x 24- Trainer #6
Fringe Benefits	\$16	1.35% on Hourly Pay- Trainer #1
	\$16	1.35% on Hourly Pay- Trainer #2
	\$16	1.35% on Hourly Pay- Trainer #3
	\$16	1.35% on Hourly Pay- Trainer #4
	\$16	1.35% on Hourly Pay- Trainer #5
	\$16	1.35% on Hourly Pay- Trainer #6
Travel and Lodging	\$3,540	Two Days/Nights per Trainer Per Diem
	\$590	Food/Lodging 2x5195- Trainer #1
	\$590	Food/Lodging 2x5195- Trainer #2
	\$590	Food/Lodging 2x5195- Trainer #3
	\$590	Food/Lodging 2x5195- Trainer #4
	\$590	Food/Lodging 2x5195- Trainer #5
	\$590	Food/Lodging 2x5195- Trainer #6
Interpreting and CART Services	\$4,960	Four interpreters at \$65/hour x 16 hours each
	\$1,040	\$65/hour x 8 hours- Interpreter #1
	\$1,040	\$65/hour x 8 hours- Interpreter #2
	\$1,040	\$65/hour x 8 hours- Interpreter #3
	\$1,040	\$65/hour x 8 hours- Interpreter #4
Interpreter Mileage	\$200	Mileage- Interpreter #1
	\$200	Mileage- Interpreter #2
	\$200	Mileage- Interpreter #3
	\$200	Mileage- Interpreter #4
Training Materials	\$225	3 manuals for each primary trainer \$25
Manuals	\$450	3 manuals for each new trainer \$25
Office Supplies	\$300	Office Supplies
Light Snacks for Trainings	\$75	\$25 per training
Teleconferences for Georgia Pines	\$50,000	Establish a teleconference system for PINEL
Cox Campus Courses	#####	Create Online PL Courses. 3x\$50,000
Interpreting Services	\$50,000	Incidental Interpreting Needs
Total Year One	#####	

Year Two	\$94,888	
Tain the Providers and Teachers	\$6,576	6 Trainers at \$45/hr for 24 hours each
Hourly Pay	\$1,080	\$45/hr x 24- Trainer #1
	\$1,080	\$45/hr x 24- Trainer #2
	\$1,080	\$45/hr x 24- Trainer #3
	\$1,080	\$45/hr x 24- Trainer #4
	\$1,080	\$45/hr x 24- Trainer #5
	\$1,080	\$45/hr x 24- Trainer #6
Fringe Benefits	\$16	1.35% on Hourly Pay- Trainer #1
	\$16	1.35% on Hourly Pay- Trainer #2
	\$16	1.35% on Hourly Pay- Trainer #3
	\$16	1.35% on Hourly Pay- Trainer #4
	\$16	1.35% on Hourly Pay- Trainer #5
	\$16	1.35% on Hourly Pay- Trainer #6
Travel and Lodging	\$3,540	Two Days/Nights per Trainer Per Diem
	\$590	Food/Lodging 2x5195- Trainer #1
	\$590	Food/Lodging 2x5195- Trainer #2
	\$590	Food/Lodging 2x5195- Trainer #3
	\$590	Food/Lodging 2x5195- Trainer #4
	\$590	Food/Lodging 2x5195- Trainer #5
	\$590	Food/Lodging 2x5195- Trainer #6
Interpreting and CART Services	\$6,840	12 interpreters at \$65/hour x 8 hours each
	\$520	\$65/hour x 8 hours- Interpreter #1
	\$520	\$65/hour x 8 hours- Interpreter #2
	\$520	\$65/hour x 8 hours- Interpreter #3
	\$520	\$65/hour x 8 hours- Interpreter #4
	\$520	\$65/hour x 8 hours- Interpreter #5
	\$520	\$65/hour x 8 hours- Interpreter #6
	\$520	\$65/hour x 8 hours- Interpreter #7
	\$520	\$65/hour x 8 hours- Interpreter #8
	\$520	\$65/hour x 8 hours- Interpreter #9
	\$520	\$65/hour x 8 hours- Interpreter #10
	\$520	\$65/hour x 8 hours- Interpreter #11
	\$520	\$65/hour x 8 hours- Interpreter #12
Interpreter Mileage	\$200	Mileage- Interpreter #1
	\$200	Mileage- Interpreter #2
	\$200	Mileage- Interpreter #3
	\$200	Mileage- Interpreter #4
	\$200	Mileage- Interpreter #5
	\$200	Mileage- Interpreter #6
	\$200	Mileage- Interpreter #7
	\$200	Mileage- Interpreter #8
	\$200	Mileage- Interpreter #9
	\$200	Mileage- Interpreter #10
	\$200	Mileage- Interpreter #11
	\$200	Mileage- Interpreter #12
Training Materials	\$9,000	3 manuals per participant
Manuals	\$3,000	3 manuals x 120 participants=360 x\$25
Office Supplies	\$300	Office Supplies \$50 per trainer
Light Snacks for Regional Trainings	\$240	\$40 per training
	\$200	Total for 1st Training
	\$200	Total for 2nd Training
	\$200	Total for 3rd Training
Interpreting Services	\$50,000	Incidental Interpreting Needs
Year Two Total	\$94,888	

Year Three	\$95,592	
Tain the Providers and Teachers	\$4,384	4 Trainers at \$45/hr for 24 hours each
Hourly Pay	\$1,080	\$45/hr x 24- Trainer #1
	\$1,080	\$45/hr x 24- Trainer #2
	\$1,080	\$45/hr x 24- Trainer #3
	\$1,080	\$45/hr x 24- Trainer #4
Fringe Benefits	\$16	1.35% on Hourly Pay- Trainer #1
	\$16	1.35% on Hourly Pay- Trainer #2
	\$16	1.35% on Hourly Pay- Trainer #3
	\$16	1.35% on Hourly Pay- Trainer #4
Travel and Lodging	\$2,360	Two Days/Nights per Trainer Per Diem
	\$390	Food/Lodging 2x5195- Trainer #1
	\$390	Food/Lodging 2x5195- Trainer #2
	\$390	Food/Lodging 2x5195- Trainer #3
	\$390	Food/Lodging 2x5195- Trainer #4
Interpreting and CART Services	\$5,760	8 interpreters at \$65/hour x 8 hours each
	\$520	\$65/hour x 8 hours- Interpreter #1
	\$520	\$65/hour x 8 hours- Interpreter #2
	\$520	\$65/hour x 8 hours- Interpreter #3
	\$520	\$65/hour x 8 hours- Interpreter #4
	\$520	\$65/hour x 8 hours- Interpreter #5
	\$520	\$65/hour x 8 hours- Interpreter #6
	\$520	\$65/hour x 8 hours- Interpreter #7
	\$520	\$65/hour x 8 hours- Interpreter #8
Interpreter Mileage	\$200	Mileage- Interpreter #1
	\$200	Mileage- Interpreter #2
	\$200	Mileage- Interpreter #3
	\$200	Mileage- Interpreter #4
	\$200	Mileage- Interpreter #5
	\$200	Mileage- Interpreter #6
	\$200	Mileage- Interpreter #7
	\$200	Mileage- Interpreter #8
Training Materials	\$6,000	3 manuals per participant
Manuals	\$3,000	3 manuals x 200 participants=600 x\$25
Office Supplies	\$300	Office Supplies \$50 per trainer
Light Snacks for Trainings	\$160	\$40 per training
	\$160	Total for 1st Training
	\$160	Total for 2nd Training
	\$160	Total for 3rd Training
Interpreting Services	\$50,000	Incidental Interpreting Needs
Year Three Total	\$95,592	

Year Four	\$92,444	
Tain the Assessors	\$3,388	3 Trainers at \$45/hr for 24 hours each
Hourly Pay	\$1,080	\$45/hr x 24- Trainer #1
	\$1,080	\$45/hr x 24- Trainer #2
	\$1,080	\$45/hr x 24- Trainer #3
Fringe Benefits	\$16	1.35% on Hourly Pay- Trainer #1
	\$16	1.35% on Hourly Pay- Trainer #2
	\$16	1.35% on Hourly Pay- Trainer #3
Travel and Lodging	\$1,770	Two Days/Nights per Trainer Per Diem
	\$390	Food/Lodging 2x5195- Trainer #1
	\$390	Food/Lodging 2x5195- Trainer #2
	\$390	Food/Lodging 2x5195- Trainer #3
Interpreting and CART Services	\$4,320	6 interpreters at \$65/hour x 8 hours each
	\$520	\$65/hour x 8 hours- Interpreter #1
	\$520	\$65/hour x 8 hours- Interpreter #2
	\$520	\$65/hour x 8 hours- Interpreter #3
	\$520	\$65/hour x 8 hours- Interpreter #4
	\$520	\$65/hour x 8 hours- Interpreter #5
	\$520	\$65/hour x 8 hours- Interpreter #6
Interpreter Mileage	\$200	Mileage- Interpreter #1
	\$200	Mileage- Interpreter #2
	\$200	Mileage- Interpreter #3
	\$200	Mileage- Interpreter #4
	\$200	Mileage- Interpreter #5
	\$200	Mileage- Interpreter #6
Training Materials	\$4,500	3 manuals per participant
Manuals	\$1,500	3 manuals x 150 participants=450 x\$25
Office Supplies	\$150	Office Supplies \$50 per trainer
Light Snacks for Trainings	\$120	\$40 per training
	\$120	Total for 1st Training
	\$120	Total for 2nd Training
	\$120	Total for 3rd Training
Interpreting Services	\$50,000	Incidental Interpreting Needs
Year Four Total	\$92,444	

Year Five	\$98,296	
Tain the Assessors	\$2,192	2 Trainers at \$45/hr for 24 hours each
Hourly Pay	\$1,080	\$45/hr x 24- Trainer #1
	\$1,080	\$45/hr x 24- Trainer #2
Fringe Benefits	\$16	1.35% on Hourly Pay- Trainer #1
	\$16	1.35% on Hourly Pay- Trainer #2
Travel and Lodging	\$1,180	Two Days/Nights per Trainer Per Diem
	\$300	Food/Lodging 2x5195- Trainer #1
	\$300	Food/Lodging 2x5195- Trainer #2
Interpreting and CART Services	\$2,880	4 interpreters at \$65/hour x 8 hours each
	\$520	\$65/hour x 8 hours- Interpreter #1
	\$520	\$65/hour x 8 hours- Interpreter #2
	\$520	\$65/hour x 8 hours- Interpreter #3
	\$520	\$65/hour x 8 hours- Interpreter #4
Interpreter Mileage	\$200	Mileage- Interpreter #1
	\$200	Mileage- Interpreter #2
	\$200	Mileage- Interpreter #3
	\$200	Mileage- Interpreter #4
Training Materials	\$3,000	3 manuals per participant
Manuals	\$1,000	3 manuals x 100 participants=300 x\$25
Office Supplies	\$100	Office Supplies \$50 per trainer
Light Snacks for Trainings	\$80	\$40 per training
	\$80	Total for 1st Training
	\$80	Total for 2nd Training
	\$80	Total for 3rd Training
Interpreting Services	\$50,000	Incidental Interpreting Needs
Year Five Total	\$98,296	

GADOE STATE SCHOOLS 4

#4 PL for Educators working w/School Age and Teacher Prep Student teachers
 Foundations for Literacy (FL) and Foreign Learning Our Way to Reading (FOWR)

Year One	Year Two	Year Three	Year Four
<p>Year One</p> <p>FOWR Primary Trainer \$10,000 3 day training fee, flight, and lodging DOE Employee 3 Primary Trainers at \$50/hr for 24 hours each Train the Trainers \$6,576 6 Trainers at \$45/hr for 24 hours each</p> <p>Hourly Pay \$1,080 \$45/hr x 24-Trainer #1 \$1,080 \$45/hr x 24-Trainer #2 \$1,080 \$45/hr x 24-Trainer #3 \$1,080 \$45/hr x 24-Trainer #4 \$1,080 \$45/hr x 24-Trainer #5 \$1,080 \$45/hr x 24-Trainer #6</p> <p>Fringe Benefits \$16 1.35% on Hourly Pay- Trainer #1 \$16 1.35% on Hourly Pay- Trainer #2 \$16 1.35% on Hourly Pay- Trainer #3 \$16 1.35% on Hourly Pay- Trainer #4 \$16 1.35% on Hourly Pay- Trainer #5 \$16 1.35% on Hourly Pay- Trainer #6</p> <p>Travel and Lodging \$3,540 Two Days/Nights per Trainer Per Diem \$390 Food/Lodging 2x1595- Trainer #1 \$390 Food/Lodging 2x1595- Trainer #2 \$390 Food/Lodging 2x1595- Trainer #3 \$390 Food/Lodging 2x1595- Trainer #4 \$390 Food/Lodging 2x1595- Trainer #5 \$390 Food/Lodging 2x1595- Trainer #6</p> <p>YEAR ONE 24 hours of training follow-up coaching and in new groups with three or potential new trainers in each group.</p> <p>Interpreting and CART Services \$4,960 Four interpreters at \$65/hour x 16 hours each \$1,040 \$65/hour x 16 hours- Interpreter #1 \$1,040 \$65/hour x 16 hours- Interpreter #2 \$1,040 \$65/hour x 16 hours- Interpreter #3 \$1,040 \$65/hour x 16 hours- Interpreter #4</p> <p>Interpreter Mileage \$200 Mileage-Interpreter #1 \$200 Mileage-Interpreter #2 \$200 Mileage-Interpreter #3 \$200 Mileage-Interpreter #4</p> <p>Training Materials FR Kits and Assembly \$2,000 FOWR Kits \$1,900 Office Supplies \$200 Light Snacks for Trainings \$100 Camp Courses Create Online PL Courses 4x\$50,000</p> <p>Total Year One \$100,000</p>	<p>Year Two</p> <p>Train the Trainers \$6,576 Hourly Pay 6 Trainers at \$45/hr for 24 hours each \$1,080 \$45/hr x 24-Trainer #1 \$1,080 \$45/hr x 24-Trainer #2 \$1,080 \$45/hr x 24-Trainer #3 \$1,080 \$45/hr x 24-Trainer #4 \$1,080 \$45/hr x 24-Trainer #5 \$1,080 \$45/hr x 24-Trainer #6</p> <p>Fringe Benefits \$16 1.35% on Hourly Pay- Trainer #1 \$16 1.35% on Hourly Pay- Trainer #2 \$16 1.35% on Hourly Pay- Trainer #3 \$16 1.35% on Hourly Pay- Trainer #4 \$16 1.35% on Hourly Pay- Trainer #5 \$16 1.35% on Hourly Pay- Trainer #6</p> <p>Travel and Lodging \$3,540 Two Days/Nights per Trainer Per Diem \$390 Food/Lodging 2x1595- Trainer #1 \$390 Food/Lodging 2x1595- Trainer #2 \$390 Food/Lodging 2x1595- Trainer #3 \$390 Food/Lodging 2x1595- Trainer #4 \$390 Food/Lodging 2x1595- Trainer #5 \$390 Food/Lodging 2x1595- Trainer #6</p> <p>YEAR TWO 16 hour training follow-up coaching and 8 hours of prep time in integrated group each up to 20 professionals in each group. Each of the six trainers will train food providers and teachers to follow the protocols in the manual. These trainings will happen three times a year for each trainer.</p> <p>Interpreting and CART Services \$8,640 12 interpreters at \$65/hour x 8 hours each \$520 \$65/hour x 8 hours- Interpreter #1 \$520 \$65/hour x 8 hours- Interpreter #2 \$520 \$65/hour x 8 hours- Interpreter #3 \$520 \$65/hour x 8 hours- Interpreter #4 \$520 \$65/hour x 8 hours- Interpreter #5 \$520 \$65/hour x 8 hours- Interpreter #6 \$520 \$65/hour x 8 hours- Interpreter #7 \$520 \$65/hour x 8 hours- Interpreter #8 \$520 \$65/hour x 8 hours- Interpreter #9 \$520 \$65/hour x 8 hours- Interpreter #10 \$520 \$65/hour x 8 hours- Interpreter #11 \$520 \$65/hour x 8 hours- Interpreter #12</p> <p>Interpreter Mileage \$200 Mileage-Interpreter #1 \$200 Mileage-Interpreter #2 \$200 Mileage-Interpreter #3 \$200 Mileage-Interpreter #4 \$200 Mileage-Interpreter #5 \$200 Mileage-Interpreter #6 \$200 Mileage-Interpreter #7 \$200 Mileage-Interpreter #8 \$200 Mileage-Interpreter #9 \$200 Mileage-Interpreter #10 \$200 Mileage-Interpreter #11 \$200 Mileage-Interpreter #12</p> <p>Training Materials Manuals \$40,000 Office Supplies \$38,000 Light Snacks for Regional Trainings \$340 Total for 2nd Training \$96,996 Total for 3rd Training \$96,996</p> <p>Year Two Total \$100,000</p>	<p>Year Three</p> <p>Train the Providers and Teachers \$4,384 Hourly Pay 4 Trainers at \$45/hr for 24 hours each \$1,080 \$45/hr x 24-Trainer #1 \$1,080 \$45/hr x 24-Trainer #2 \$1,080 \$45/hr x 24-Trainer #3 \$1,080 \$45/hr x 24-Trainer #4</p> <p>Fringe Benefits \$16 1.35% on Hourly Pay- Trainer #1 \$16 1.35% on Hourly Pay- Trainer #2 \$16 1.35% on Hourly Pay- Trainer #3 \$16 1.35% on Hourly Pay- Trainer #4</p> <p>Travel and Lodging \$2,360 Two Days/Nights per Trainer Per Diem \$390 Food/Lodging 2x1595- Trainer #1 \$390 Food/Lodging 2x1595- Trainer #2 \$390 Food/Lodging 2x1595- Trainer #3 \$390 Food/Lodging 2x1595- Trainer #4</p> <p>Interpreting and CART Services \$5,760 12 interpreters at \$65/hour x 8 hours each \$520 \$65/hour x 8 hours- Interpreter #1 \$520 \$65/hour x 8 hours- Interpreter #2 \$520 \$65/hour x 8 hours- Interpreter #3 \$520 \$65/hour x 8 hours- Interpreter #4 \$520 \$65/hour x 8 hours- Interpreter #5 \$520 \$65/hour x 8 hours- Interpreter #6 \$520 \$65/hour x 8 hours- Interpreter #7 \$520 \$65/hour x 8 hours- Interpreter #8 \$520 \$65/hour x 8 hours- Interpreter #9 \$520 \$65/hour x 8 hours- Interpreter #10 \$520 \$65/hour x 8 hours- Interpreter #11 \$520 \$65/hour x 8 hours- Interpreter #12</p> <p>Interpreter Mileage \$200 Mileage-Interpreter #1 \$200 Mileage-Interpreter #2 \$200 Mileage-Interpreter #3 \$200 Mileage-Interpreter #4 \$200 Mileage-Interpreter #5 \$200 Mileage-Interpreter #6 \$200 Mileage-Interpreter #7 \$200 Mileage-Interpreter #8 \$200 Mileage-Interpreter #9 \$200 Mileage-Interpreter #10 \$200 Mileage-Interpreter #11 \$200 Mileage-Interpreter #12</p> <p>Training Materials Manuals \$30,000 Office Supplies \$19,000 Light Snacks for Trainings \$160 Total for 1st Training \$61,864 Total for 2nd Training \$61,864 Total for 3rd Training \$61,864</p> <p>Year Three Total \$100,000</p>	<p>Year Four</p> <p>Train the Assessors \$3,288 Hourly Pay 3 Trainers at \$45/hr for 24 hours each \$1,080 \$45/hr x 24-Trainer #1 \$1,080 \$45/hr x 24-Trainer #2 \$1,080 \$45/hr x 24-Trainer #3</p> <p>Fringe Benefits \$16 1.35% on Hourly Pay- Trainer #1 \$16 1.35% on Hourly Pay- Trainer #2 \$16 1.35% on Hourly Pay- Trainer #3</p> <p>Travel and Lodging \$1,770 Two Days/Nights per Trainer Per Diem \$390 Food/Lodging 2x1595- Trainer #1 \$390 Food/Lodging 2x1595- Trainer #2 \$390 Food/Lodging 2x1595- Trainer #3</p> <p>Interpreting and CART Services \$4,320 12 interpreters at \$65/hour x 8 hours each \$520 \$65/hour x 8 hours- Interpreter #1 \$520 \$65/hour x 8 hours- Interpreter #2 \$520 \$65/hour x 8 hours- Interpreter #3 \$520 \$65/hour x 8 hours- Interpreter #4 \$520 \$65/hour x 8 hours- Interpreter #5 \$520 \$65/hour x 8 hours- Interpreter #6 \$520 \$65/hour x 8 hours- Interpreter #7 \$520 \$65/hour x 8 hours- Interpreter #8 \$520 \$65/hour x 8 hours- Interpreter #9 \$520 \$65/hour x 8 hours- Interpreter #10 \$520 \$65/hour x 8 hours- Interpreter #11 \$520 \$65/hour x 8 hours- Interpreter #12</p> <p>Interpreter Mileage \$200 Mileage-Interpreter #1 \$200 Mileage-Interpreter #2 \$200 Mileage-Interpreter #3 \$200 Mileage-Interpreter #4 \$200 Mileage-Interpreter #5 \$200 Mileage-Interpreter #6 \$200 Mileage-Interpreter #7 \$200 Mileage-Interpreter #8 \$200 Mileage-Interpreter #9 \$200 Mileage-Interpreter #10 \$200 Mileage-Interpreter #11 \$200 Mileage-Interpreter #12</p> <p>Training Materials Manuals \$20,000 Office Supplies \$19,000 Light Snacks for Trainings \$120 Total for 1st Training \$48,328 Total for 2nd Training \$48,328 Total for 3rd Training \$48,328</p> <p>Year Four Total \$100,000</p>

Totals	Year 1	Year 2	Year 3	Year 4	Year 5	Deliverable Totals		Birth-5 yrs	K-5th	6th-8th	9th-12th	Remainder
#1 Assessments	\$188,313	\$82,956	\$49,304	\$36,078	\$24,052	\$380,703	\$380,703	\$108,250	\$172,453	\$50,000	\$50,000	\$0
#2 Audiology	\$133,481	\$125,481	\$125,481	\$125,481	\$125,481	\$635,405	\$635,405	\$100,000	\$200,000	\$170,000	\$165,405	\$0
#3 EC PL	\$205,530	\$94,888	\$66,592	\$52,444	\$38,296	\$457,750	\$457,750	\$280,750	\$147,000	\$15,000	\$15,000	\$0
#4 School PL	\$233,027	\$290,988	\$185,592	\$145,584	\$106,296	\$961,487	\$961,487	\$0	\$458,487	\$253,000	\$250,000	\$0
Yearly Total	\$760,351	\$594,313	\$426,969	\$359,587	\$294,125	\$2,435,345	\$2,435,345	\$489,000	\$977,940	\$488,000	\$480,405	\$0
								Percentage	20.08%	40.16%	20.04%	19.73%

Birth-5 yrs
 K-5th
 6th-8th
 9th-12th

Section 9: Budget Summary

The budget consists of a plan moving from heavy outside training to a more sustainable “train the trainer” model. The current outreach model being used by the State Schools Division within the GaDOE for young children who are DHH (birth – 5) includes Georgia PINES that serves the entire state. Outreach for professionals working with school age children who are DHH (P-12) in the state is divided into six consortiums: South Georgia (Valdosta area), Southeast GA, Middle Georgia, North Georgia, West Georgia, and the Atlanta Metro area. These regional divisions are often aligned with Regional Education Service Agencies (RESAs) and Georgia Learning Resources Systems (GLRSs) and will be used for providing the training for all aspects of this grant.

Year One consists of developing content for both professional learning and information sharing for assessment, audiology, and early childcare providers. This new content and two research-based interventions will be taught to professionals who will become statewide trainers. The budget includes transportation, lodging, and per diem meals in accordance with state regulations for both trainers and trainees. Expenses will be reduced by using in house (GaDOE) trainers whenever possible although several trainers may be recruited from outside agencies. There has been a lack of audiological services in the state for years. The GaDOE Georgia Mobile Audiology Program was recently created to address this issue; however the backlog of children who need services is almost insurmountable with the available staff. A limited term, full-time audiologist is being requested for three of five years of the grant in order to catch up with the backlog. Another large expense in the grant is the cost of American Sign Language (ASL) interpreters and live captioners for all trainings to ensure the trainings are accessible to all participants. Interpreters must work in pairs for any training longer than two hours. They are typically contracted through an agency. Interpreter mileage and time on the road is an additional expense as most interpreters live in the Atlanta area and must travel for trainings. Salaries and hourly wages will be in accordance with the State Schools’ teacher salary scale. The final expense at the end of this year is to cover costs of start-up and implementation of Tele-Practice for Georgia PINES families that are in rural and/or under-served areas. This includes training for the early intervention service providers, as well as internet-enabled equipment and service. Three online courses for the birth to 5 age range and online coaching for all areas will also be developed by the Cox Campus. Training and coaching module development will begin after the initial content development for live trainings has been completed in the beginning of the year one.

Years two through five will consist of a decreasing number of professional learning trainings as the state capacity shifts from the majority of targeted professionals being untrained to the majority being trained. Professional learning trainings will be supplemented with webinars, virtual coaching opportunities, and peer-to-peer support through the Cox Campus, Georgia Mobile Audiology Program’s website, and the OCGA §30-1-5 Website.

At the end of five years, Georgia will have built an ecosystem for professionals working with children and students who are DHH. Additionally, the state will have a scope and sequence of professional learning (birth to 5 and P-12) that will be vetted by various stakeholder groups. Professionals new to Georgia and/or new to the field can be integrated easily by following the Georgia professional learning scope and sequence. All agencies will have a clear understanding of the unique needs of children and students who are DHH as well as the resources available through the Division of State Schools Statewide Outreach Program within the GaDOE, DECAL, and Cox Campus.

Year One Budget

\$188,313	Deliverable #1- Assessment
\$133,481	Deliverable #2- Georgia Mobile Audiology Program
\$205,530	Deliverable #3- Early Childhood Professional Learning (Birth – 5)
<u>\$233,027</u>	Deliverable #4- Evidence-based Reading Interventions for School-Age Children: Trainings and Implementation (K-12)
\$760,351	Year One Request

Year Two Budget

\$82,956	Deliverable #1- Assessment
\$125,481	Deliverable #2- Georgia Mobile Audiology Program
\$94,888	Deliverable #3- Early Childhood Professional Learning (Birth – 5)
<u>\$290,988</u>	Deliverable #4- Evidence-based Reading Interventions for School-Age Children: Trainings and Implementation (K-12)
\$594,313	Year Two Request

Year Three Budget

\$49,304	Deliverable #1- Assessment
\$125,481	Deliverable #2- Georgia Mobile Audiology Program
\$66,592	Deliverable #3- Early Childhood Professional Learning (Birth – 5)
<u>\$185,592</u>	Deliverable #4- Evidence-based Reading Interventions for School-Age Children: Trainings and Implementation (K-12)
\$426,969	Year Three Request

Year Four Budget

\$36,078	Deliverable #1- Assessment
\$125,481	Deliverable #2- Georgia Mobile Audiology Program
\$42,444	Deliverable #3- Early Childhood Professional Learning (Birth – 5)
<u>\$145,584</u>	Deliverable #4- Evidence-based Reading Interventions for School-Age Children: Trainings and Implementation (K-12)
\$359,587	Year Four Request

Year Five Budget

\$24,052	Deliverable #1- Assessment
\$125,481	Deliverable #2- Georgia Mobile Audiology Program
\$38,296	Deliverable #3- Early Childhood Professional Learning (Birth – 5)
<u>\$106,296</u>	Deliverable #4- Evidence-based Reading Interventions for School-Age Children: Trainings and Implementation (K-12)
\$294,125	Year Five Request

\$2,435,345 Total Grant Request

Fund Allocation Ratios Table

	Birth-5 yrs	K-5th	6th-8th	9th-12th	Remainder
	\$108,250	\$172,453	\$50,000	\$50,000	\$0
	\$100,000	\$200,000	\$170,000	\$165,405	\$0
	\$280,750	\$147,000	\$15,000	\$15,000	\$0
	\$0	\$458,487	\$253,000	\$250,000	\$0
Totals	\$489,000	\$977,940	\$488,000	\$480,405	\$0
Percentages	20.08%	40.16%	20.04%	19.73%	

Partner/Program/Organization Name

Deaf Education Teacher Preparation Program / Georgia State University

1. Leadership Team Members

Judith Emerson

2. How the B-5 or K-12 (circle one) literacy team will coordinate professional learning, comprehensive literacy instruction, community activities, and literacy assessments to launch, monitor, and improve implementation?

As a partner, our program will collaborate with LEAs by ensuring that teacher candidates in our program are prepared to address the literacy initiatives in all areas of professional development.

3. How evidence-based practices and activities will be selected?

The Deaf Education Teacher Preparation Program content is directly related to active research in the area of literacy for learners who are Deaf or Hard of Hearing at our university. This provides relevant and current evidence-based practices as part of the professional development and training of our future teachers of the deaf.

4. How will your organization identify professionals/teachers/students for professional development, literacy intervention or other support services?

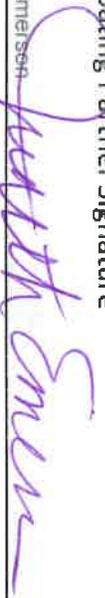
Teacher candidates in the Deaf Education Teacher Preparation Program will be included in professional development opportunities.

5. How to monitor the implementation and effectiveness of services?

Teacher candidates complete a capstone teacher performance assessment in Deaf Education. A passing score on the assessment is required for state teaching certification.

Participating Partner Signature

Judith Emerson



Deaf Education Faculty

Signature

Position

Partner/Program/Organization Name	
1. Leadership Team Members	
2. How the B-5 or K-12 (circle one) literacy team will coordinate professional learning, comprehensive literacy instruction, community activities, and literacy assessments to launch, monitor, and improve implementation?	
3. How evidence-based practices and activities will be selected?	
4. How will your organization identify professionals/teachers/students for professional development, literacy intervention or other support services?	
5. How to monitor the implementation and effectiveness of services?	


 Cassandra Matthews (Feb 3, 2020)

Literacy Specialist, Academic Officer, and Federal Programs Coordinator for the Division of State Schools within the Georgia Department of Education

Position

Partner/Program/Organization Name _____	
1. Leadership Team Members	
2. How the B-5 or K-12 (circle one) literacy team will coordinate professional learning, comprehensive literacy instruction, community activities, and literacy assessments to launch, monitor, and improve implementation?	
3. How evidence-based practices and activities will be selected?	
4. How will your organization identify professionals/teachers/students for professional development, literacy intervention or other support services?	
5. How to monitor the implementation and effectiveness of services?	
Participating Partner Signature	
<i>Heidi J. Evans, PhD</i>	_____
Signature	Position

Partner/Program/Organization Name _____	
1. Leadership Team Members	
2. How the B-5 or K-12 (circle one) literacy team will coordinate professional learning, comprehensive literacy instruction, community activities, and literacy assessments to launch, monitor, and improve implementation?	
3. How evidence-based practices and activities will be selected?	
4. How will your organization identify professionals/teachers/students for professional development, literacy intervention or other support services?	
5. How to monitor the implementation and effectiveness of services?	
Participating Partner Signature	
 _____ Signature	_____ Position

Partner/Program/Organization Name		Jennie Couture - Practice and Support Services - Department of Early Care and Learning (DECAL)
1. Leadership Team Members	Jennie Couture, Denise Jensen – Quality Rated Operations Director, Christi Moore - Director of Professional Learning	
2. How the B-5 literacy team will coordinate professional learning, comprehensive literacy instruction, community activities, and literacy assessments to launch, monitor, and improve implementation?	Through a coordinated effort with DECAL, Quality Rated, and public and private early childcare providers, DECAL will ensure that the training will be approved for awarding state credit to hours to meet child care licensing requirements and DECAL will explore ways to have the training reflected in the Quality Rated application process.	
3. How evidence-based practices and activities will be selected?	DECAL will work with researchers from Georgia State University and Valdosta State University as well as staff within the State Schools Division Statewide Outreach Program within GaDOE and Talk With Me Baby (TWMB) collaborators to pull existing evidence-based practices and state/national recommended best practices (e.g., language nutrition, 1-3-6 benchmarks, GELDS) into a cohesive and consolidated professional learning workshop appropriate for a variety of early childhood providers.	
4. How will your organization identify professionals/teachers/students for professional development, literacy intervention or other support services?	State Schools Division Statewide Outreach Program within GaDOE will work with local LEAs with SPED Preschool classrooms to roll out the PL across the state. DECAL will support PL workshops through recruitment of early childcare providers and will provide training locations.	
5. How to monitor the implementation and effectiveness of services?	DECAL along with the GaDOE Division of State Schools Statewide Outreach Program and Georgia Mobile Audiology will collect data on the number of early childcare providers receiving training versus the number of existing childcare providers in the 6 regional DHH consortium areas. Additional data includes the number of children being referred for hearing screenings/diagnostic exams in the centers where training occurred and the number served by GaDOE Georgia Mobile Audiology.	
Participating Partner Signature	Director of Practice and Support Services and Centers for Disease Control (CDC) Act Early Ambassador to Georgia within the Department of Early Childcare and Learning (DECAL)	
		
Signature	Position	

Grant Team and VSU faculty training teachers of the Deaf

<p>1. Leadership Team Members</p>	<p>Collaboration between the grant team and the EPP specializing in Deaf and Hard of Hearing will work together to embed training hours within current coursework to further prepare pre-service teachers. The two groups of professions will further work together to develop other training opportunities, as needed, for synchronous, as well as asynchronous training. Trainings will be made available to teachers of the Deaf/Hard of Hearing that provide services in the southern region of the state. The faculty at VSU stay in close contact with those professionals serving the D/HH population in this area and will be instrumental in helping to launch, monitor and promote instructional learning.</p>
<p>2. How the B-5 or K-12 (circle one) literacy team will coordinate professional learning, comprehensive literacy instruction, community activities, and literacy assessments to launch, monitor, and improve implementation?</p>	<p>Evidence-based practices identified by the grant team, in conjunction with input from VSU faculty will be the focus of the training with current students enrolled in Valdosta State University's EPP in Deaf Education. Those instructional practices identified in the grant that are evidence-based and designed specifically for students who are DHH: Foundations for Literacy and Fingerspelling our Way to Reading, as well as instruction in Theory of Mind will be included. Furthermore, universal strategies for language and literacy development for all Georgia teachers serving students who are DHH will be included.</p>
<p>3. How evidence-based practices and activities will be selected?</p>	<p>Pre-service teachers enrolled in the Special Education: Deaf Education professional block (5-Year MED teacher candidates, MED Track 2 candidates and MAT teacher candidates) will be provided with the training.</p> <p>Professionals in the South Georgia Teachers of the Deaf/Hard-of-Hearing Consortium will also be provided with training in these evidence-based literacy interventions.</p>
<p>4. How will your organization identify professionals/teachers/students for professional development, literacy intervention or other support services?</p>	<p>By developing a partnership between professionals at VSU and the Grant Team a seamless network of communication will be established therefore enabling the implementation and the evaluation of future trainings. This grant will provide pre-service teachers as well as employed teachers of the D/HH with this training. The effectiveness of these services will be determined by the literacy outcomes within the school age D/HH population.</p>
<p>5. How to monitor the implementation and effectiveness of services?</p>	<p>Participating Partner Signature</p> <p><i>Marilyn C. Scheetz</i></p> <p>Signature</p> <p>Professor & Program Coordinator, Deaf Education, Valdosta State Un</p> <p>Position</p>

Partner/Program/Organization Name _____	
1. Leadership Team Members	
2. How the B to 3rd grade literacy team will coordinate professional learning, comprehensive literacy instruction, community activities, and literacy assessments to launch, monitor, and improve implementation?	
3. How evidence-based practices and activities will be selected?	
4. How will your organization identify professionals/teachers/students for professional development, literacy intervention or other support services?	
5. How to monitor the implementation and effectiveness of services?	
Participating Partner Signature	
	
Signature	Position _____

Partner/Program/Organization Name _____	
1. Leadership Team Members	
2. How the B-5 or K-12 (circle one) literacy team will coordinate professional learning, comprehensive literacy instruction, community activities, and literacy assessments to launch, monitor, and improve implementation?	
3. How evidence-based practices and activities will be selected?	
4. How will your organization identify professionals/teachers/students for professional development, literacy intervention or other support services?	
5. How to monitor the implementation and effectiveness of services?	
Participating Partner Signature	
<i>Comer Gates</i>	
Signature _____	Position _____

Research about Foundations for Literacy

Click each title to download PDFs for the articles below.

Lederberg, A.R., Easterbrooks, S.R., Burke, V. & Connor, C. M. (2018). [A Randomized-Controlled Trial of Foundations for Literacy: An Intervention for Young Children who are Deaf or Hard-of-Hearing](#). Technical Report, Atlanta, GA.

Lederberg, A. R. & Easterbrooks, S. E., Tucci, S., Burke, V. & Goldberg, H. (2016). [Effective intervention strategies for teaching early literacy skills to deaf children with cochlear implants](#). Proceedings of the Annual Symposium of the American Cochlear Implant Alliance. *Cochlear Implants International*, 17(5), 211-237.

Lederberg, A. R., Miller, E. M., Easterbrooks, S. R., & Connor, C. M. (2014). [Foundations for Literacy: An early literacy intervention for deaf and hard-of-hearing children](#). *Journal of Deaf Studies and Deaf Education*, 19(4), 438-455. doi: 10.1093/deafed/enu022 | [Abstract](#)

Tucci, S.L., & Easterbrooks, S. R., (2013). A syllable segmentation, letter-sound, and initial-sound intervention with students who are deaf or hard of hearing and use sign language. *Journal of Special Education*, 48(4). <https://doi.org/10.1177%2F0022466913504462>

Miller, E. M., Lederberg, A.R., & Easterbrooks, S. R. (2013). [Phonological awareness: Explicit instruction of young deaf and hard-of-hearing children](#). *Journal of Deaf Studies and Deaf Education*, 18, 206-227.

Beal-Alvarez, J. S., Lederberg, A. R., & Easterbrooks, S. R. (2012). [Grapheme–phoneme acquisition of deaf preschoolers](#). *Journal of Deaf Studies and Deaf Education*, 17(1), 39-60. doi:10.1093/deafed/enr030

Bergeron, J. P., Lederberg, A. R., Easterbrooks, S. R., Miller, E. M., & Connor, C. M. (2009). [Building the alphabetic principle in young children who are deaf or hard of hearing](#). *Volta Review*, 109(2-3), 87-119.

Foundations for Literacy – national randomized control trial research brief (study in peer review process for the *Journal of Deaf Studies and Deaf Education* (JDSDE)).

- 2016-17 school year
- 48 teachers
- 223 children
- 39 schools in 14 states
- Urban: Chicago, LA, Las Vegas, Tampa, Louisville
- Rural: FL, IL, MN, DE, CT
- Public, private oral/listening and spoken language, state schools
- full day and ½ day
- 40% of DHH students received instruction in classrooms with hearing children

A Randomized-Controlled Trial of *Foundations for Literacy*: An Intervention for Young Children who are Deaf or Hard-of-Hearing

Amy R. Lederberg, Susan R. Easterbrooks, Victoria Burke, & Carol Connor

Center on Literacy and Deafness

Georgia State University

Atlanta, GA

Technical Report, February 4, 2018

Abstract

The goal of the present study was to assess the effectiveness of *Foundations for Literacy* for deaf and hard-of-hearing (DHH) children. 48 teachers in 14 states were randomly assigned to either intervention or control groups. Teachers taught in rural, urban, or suburban schools. Almost half of the children were in inclusion classes with both DHH and hearing students. 70% of the teachers used only spoken language with their students, while 30% used both sign and spoken language. Teachers in the intervention group used *Foundations* for one hour a day throughout the school year. Teachers in the control group taught their typical curriculum. DHH children in the intervention group showed stronger gains on tests of spoken phonological awareness, alphabetic knowledge, and word reading than children in the control group. Effect sizes were moderate to large. All children showed accelerated gains in vocabulary learning. This study, together with previous peer-reviewed publications, supports the conclusion that the *Foundations for Literacy* is an effective intervention for DHH children. It is the only evidence-based early literacy intervention specifically developed for DHH children.

This research was supported, in part, by the Institute of Education Sciences, U.S. Department of Education, through Grant R324E060035 to the Georgia State University Research Foundation, Inc. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.

The authors wish to thank the teachers and administrators at the participating schools. Their enthusiasm and support was critical to the success of our research and the creation of an effective intervention for deaf and hard-of-hearing children.

Introduction

Young deaf and hard-of-hearing children are typically delayed in their language and literacy skills compared to their hearing peers. Early intervention can play an important role in ensuring DHH children enter elementary school with the foundational skills needed to learn to read. *Foundations for Literacy* was created specifically for that purpose. Learning objectives include phonological awareness, alphabetic knowledge, word reading, vocabulary and narrative. *Foundations* is more systematic and its instruction is more explicit, multi-modal, and intensive than interventions developed for hearing children. Much of the instruction is embedded in language-rich activities. Finally, differentiation or individualization of instruction to the wide variation of language and phonological processing skills observed for children who are DHH is integral to the design. Our previous quasi-experimental work showed that DHH children taught with *Foundations for Literacy* made more gains on tests of phonological awareness, alphabetic knowledge, decoding, vocabulary and narrative skills compared to a matched comparison group (see references for peer-reviewed publications). For example, children taught with *Foundations*, on average, made gains of 11 standard points on standardized tests of vocabulary and phonological awareness from fall to spring in the school year. The goal of the current study was to provide stronger evidence through a randomized-controlled trial (RCT) that followed the US Department of Education guidelines for RCT educational research (i.e., met criteria for strong evidence in What Works Clearinghouse).

Method

We used a clustered (at the classroom level) randomized controlled trial design. We recruited 48 teachers of young DHH children from across the US. Teachers were from 39 schools located in 14 states. Teachers taught in preschool and/or kindergarten classes located in public elementary schools, private schools for DHH children, and state schools for the deaf. Schools were in rural, urban, and suburban locations. 42% of children were in inclusion classes with both DHH and hearing students.

Teachers were randomly assigned to either treatment (*Foundations*) or wait list control (business as usual). 228 DHH children participated in the study. Intervention and control groups did not differ in mean student age ($m=51$ month; range 35 to 83 months), presence of an additional disability ($m=25\%$) or language of the classroom (70% of children in listening and spoken language classrooms, the rest had teachers who used both sign and spoken language). Intervention teachers attended a 2-day professional development workshop and received coaching (remotely) during the school year. Intervention teachers taught *Foundations* one hour a day for the school year. Control teachers taught their typical curriculums. After the study was over (i.e., summer 2018), control teachers attended the 2-day professional development workshop (all expenses paid) and received the curriculum for free.

School IRB, teacher consent, and parental consent were obtained for all children. Independent assessors, blind to condition, tested the DHH children in the fall and spring of the school year.

Results

Child gains. Hierarchical linear analyses (HLM) showed significant intervention effects for phonological awareness, alphabetic knowledge, and word reading (all significant at the $p < .01$). See Figure 1. DHH children taught with *Foundations* made larger gains in letter-sound knowledge (Cohen's $d = .615$), phonological awareness (Cohen's $d = .591$), and word reading (Cohen's $d = 1.25$), compared to control children. Intervention children made larger gains than control children on all four phonological awareness skills assessed: rhyming, syllable segmentation, phoneme blending, and phoneme isolation. Effect sizes are considered moderate to large. There were no differences between intervention and control children on language outcomes. Both intervention and control children made significant gains in standard scores on vocabulary tests.

Survey. At the end of the school year, we gave the intervention teachers a survey; there was an 84% return rate. 95% of teachers said they enjoyed teaching *Foundations*, felt their children benefitted, would recommend it to other teachers, and planned to continue using next year (if they have an appropriate class). 62% ($n = 13$) of teachers taught classes with both DHH and hearing children (some typically developing, others with disabilities). 100% agreed that their hearing children benefitted from the program as well.

Conclusions: This study provides strong evidence that *Foundations for Literacy* promotes the language and literacy skills of DHH children. Teachers also enjoyed teaching *Foundations*. These results indicate that early literacy skills, including phonological awareness, letter-sound knowledge, and early decoding, are malleable skills in DHH children, despite their decreased access to sound. *Foundations for Literacy* is the only evidence-based intervention designed for DHH children. Teachers also indicated it is appropriate for hearing children.

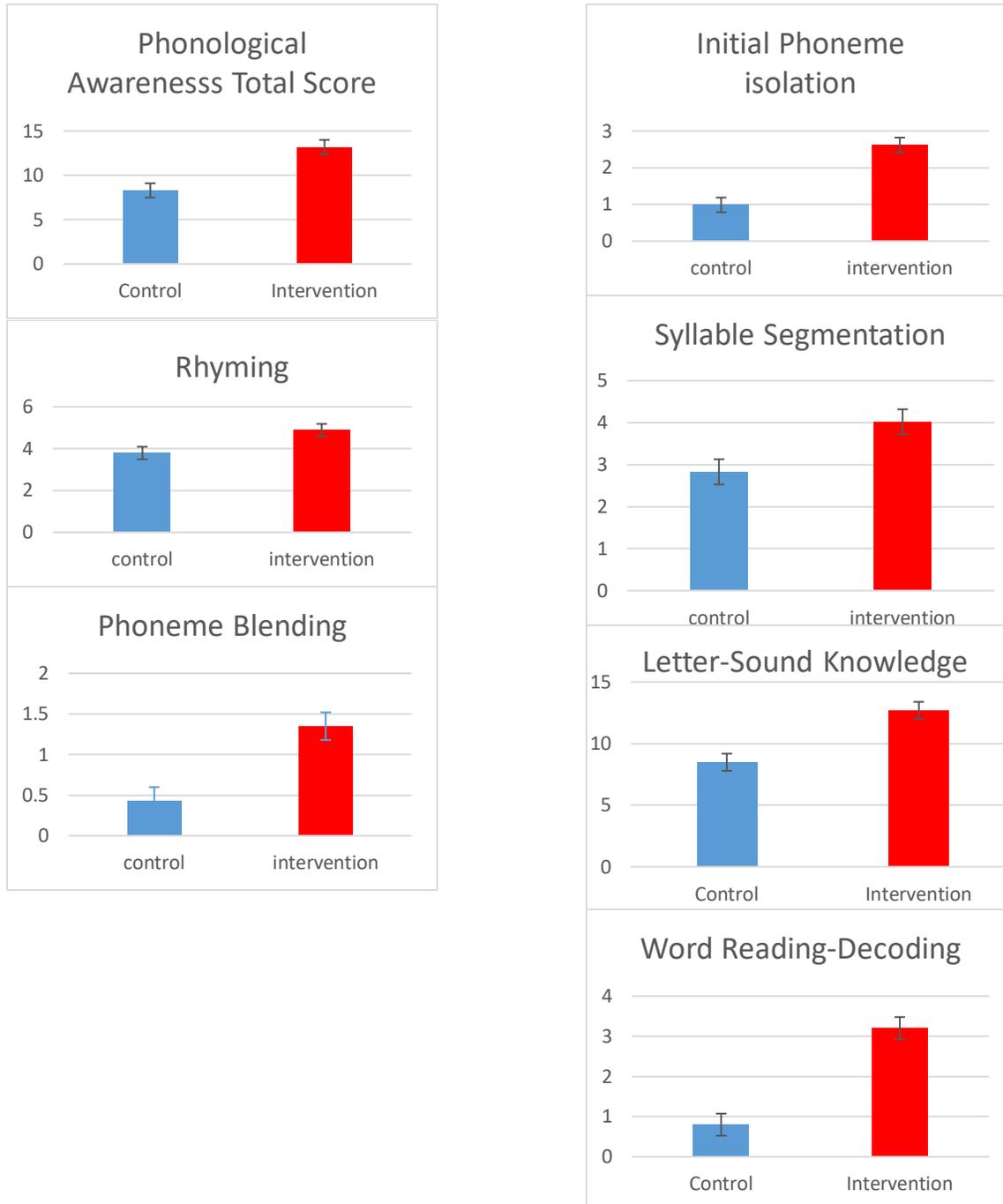
We released the *Foundation for Literacy* curriculum for sale in summer 2017 (selling it at cost). Over 150 teachers from across the country have attended professional development workshops both in Atlanta and at state-wide conferences.

We have appended some quotes from teachers and administrators (see page 5).

Our website has information about professional development opportunities and publications.

<http://clad.education.gsu.edu/foundations-literacy-home/>

Figure 1. Average learning gains made by DHH children in the intervention and control groups. All graphs represent Residualized Change Scores and depict the amount children learned during the year. These are spring scores, controlling for fall score and classroom level variance. All outcomes showed significant differences between intervention and control children.



What teachers and administrators are saying

The entire school has adopted the curriculum and it's been amazing! The teachers are team teaching and the children's progress is staggering! Both signers and our voice children are READING and it's December! Oh, and how fun the curriculum is to implement! We've had school tea parties and ice cream parties and fun with boats! We have listened to popcorn popping and made pies! The children and teachers are having the time of their lives! This curriculum has definitely aligned our literacy goals throughout the school and benefited both student and teacher!

-Debra Woods, Education Director, Heuser Hearing & Language Academy, Louisville, KY

It is going well! Many of my higher language students are really starting to get the hang of blending words, while my lower language students have gained a ton of vocabulary. I've seen more growth in my students this year than I have ever seen. I have 5 DHH students and 2 typical peers going to kindergarten, next year. I feel more than comfortable letting go of them, as they are the most prepared of any students I've had. The primary DHH teacher has used some of the materials to supplement her k-2 lessons, and those students have made growth, also. Thank you, so much, for your hard work on the program. Our students are going to have more of a chance to work on grade level and become proficient learners.

-Kelly Chenin, A.D. Guy Elementary School Las Vegas, NV

I LOVED the program and recommended to my department that it's purchased for the self-contained kindergarten class. For some of the students that have trouble discriminating sounds, I was able to write it for the kids to read. Their overall speech has improved remarkably, parents are pleased as well as fellow DHH teachers and SLPs. My two PreK students that transitioned to kindergarten the next year were able to read at a DRA 4. It is expected that a kindergartener read at a DRA 4 or 6 by the END of the year and they started that high, all thanks to the program.

-Jessica Jordan-Hogan, Doby Elementary School, FL

I have been fortunate to work with 5 students from age 3-7 with a variety of communication modes and abilities and I have impressive results from all so thanks to you and your team for the countless hours developing these materials. I wished I had this program back when I taught a center-based program for D/HH preschoolers but I have proven it is still effective for children served by an itinerant teacher with some modifications and parent-school communication!

-Jennifer Proctor, Johnston, IA

I was unsure how Foundations would work in my classroom because the majority of my students were 3 at the beginning of the school year. I was blown away by how quickly and successfully they took to this program. They have such a strong literacy "foundation" and I am excited to see what they can do next year! One of my students is transitioning to kindergarten and when I shared the results of her progress monitoring with the team at her IEP I felt confident that she would be prepared to succeed in her full inclusion kindergarten classroom. Anonymous teacher

My students rely heavily on sign language to communicate. Using Visual Phonics in conjunction with the Foundations Curriculum really made a difference in helping those with less hearing access succeed. I was so impressed to see my limited hearing students be able to identify rhyming words and learn how to blend to read words. I have not seen a curriculum before that really helps our DHH kids get the foundations for reading skills as this curriculum offers. I have seen such improvement in not only reading ability but in speech production and spelling skills as well. I would recommend this curriculum to any DHH teacher!

-Jessica Wamsley Cannella Elementary School, Tampa FL

My students LOVED the Ms. Giggle stories and all the hands on special activities.

-Rochel Nussbaum, Strivright Auditory Oral School of New York

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Publications are available on our website.

<http://clad.education.gsu.edu/foundations-literacy-home/>

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Fingerspelling Our Way to Reading Research

The Development and Evaluation of a Reading Comprehension Program
for
Deaf Children who use ASL

Utilizing Fingerspelling to Teach Reading

Currently, teachers of deaf and hard of hearing students range considerably in their use of fingerspelling with their students. In general, many teachers are underutilizing fingerspelling as a tool to enhance reading skills. Our data shows that fingerspelling can be used in reading, much like phonological awareness is used with hearing children. Research clearly shows that hearing children need to learn to break words down into individual sounds and learn to connect speech sounds to graphemes. Our approach is somewhat similar; in that we use fingerspelling to help a child develop an understanding of a printed word as both individual letters and patterns. For example, the words “make” and “take” can be divided into segments with a unique first letter and a common rime “ake”. We call these the sublexical units of the word.



Research has shown that there is a strong relationship between fingerspelling and recognition of printed English words (Schick, B., Lederberg, A., Webb, M-Y, July 2014)

Authors: Amy Lederberg, Brenda Schick, Victoria Burke, Lee Branum-Martin, Nancy Bridenbaugh

Purpose. Fingerspelling Our Way to Reading (FOWR) is a 30-minute a day supplemental literacy program developed for deaf children who sign. FOWR is designed to use ASL to teach children to read English. Three days a week, children learn to read words that share a rime using fingerspelling to focus on sublexical units. A randomized control trial of the FOWR word recognition component indicated treatment children had higher word recognition than control children. However, there were no differences on generalization assessments. The purpose of the current study is to assess the effect of adding a complementary two-day a week reading comprehension component on children's literacy outcomes.

Method. Teachers of 232 DHH children in kindergarten, first, or second grade taught FOWR 5 days a week. The word recognition component was taught three days a week. The reading comprehension component embedded taught words in connected text designed to explicitly link printed English sentences to ASL.

Results. Children who received the 5 day a week FOWR showed improved word recognition and fingerspelling phonological awareness abilities compared to control children (from the previous year's RCT). Effects for the five-day treatment ranged from 1.8 to 2.3 times the monthly gains estimated in the control groups. The children also showed progress in understanding to read taught English structures, though these results did not generalize to standardized reading comprehension tests.

Conclusion. This quasi-experimental study suggests FOWR shows promise in improving DHH children's reading, though increased intensity is likely needed to show more extensive effects.

Our program is designed using evidence-based research

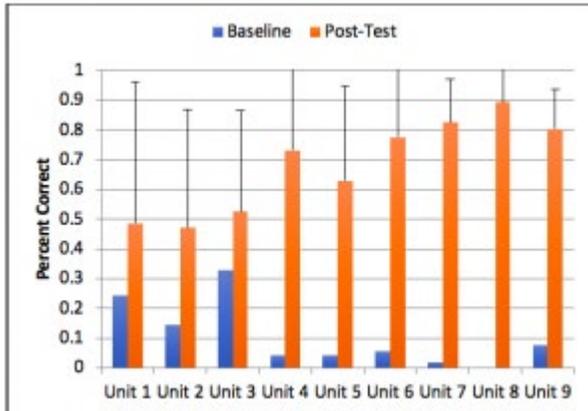
In our initial study the CLAD team gathered comprehensive language and literacy data on 290 deaf and hard of hearing children from schools around the U.S., and from a variety of classes, including:

- Local schools
- Charter schools
- Residential or day schools for the deaf
- Private schools

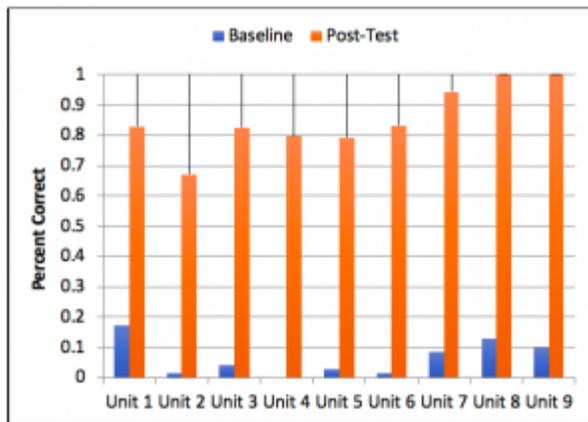
Please visit the following link for additional research:

<https://www.colorado.edu/program/fingerspelling/our-research>

Results from a Focused Study



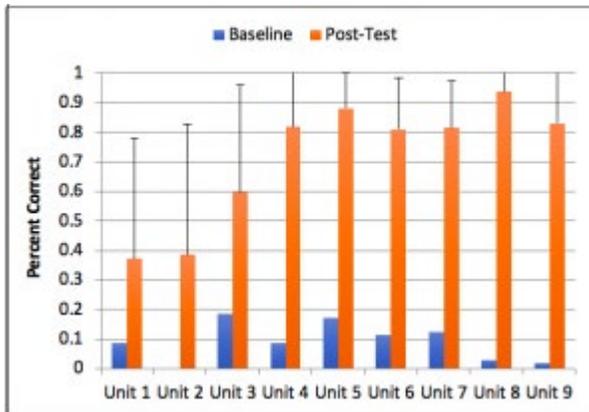
Fingerspelling - Struggling Readers



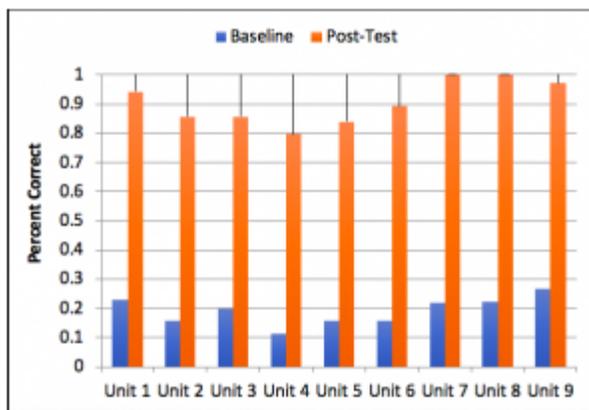
Fingerspelling - Good Readers

In 2014-2015, research teachers taught our fingerspelling program in two schools; Rocky Mountain Deaf School, and the Atlanta Area School for the Deaf. There were 14 students in K-2nd grade involved in the study. The teachers used an iterative design approach. Teachers provided feedback, and the team made modifications throughout the year to further develop the program.

The data from this fingerspelling study clearly indicated that there was a significant difference between the pre and post assessments for both Fingerspelling Production and Print Recognition.



Print Recognition - Struggling Readers



Print Recognition - Good Readers

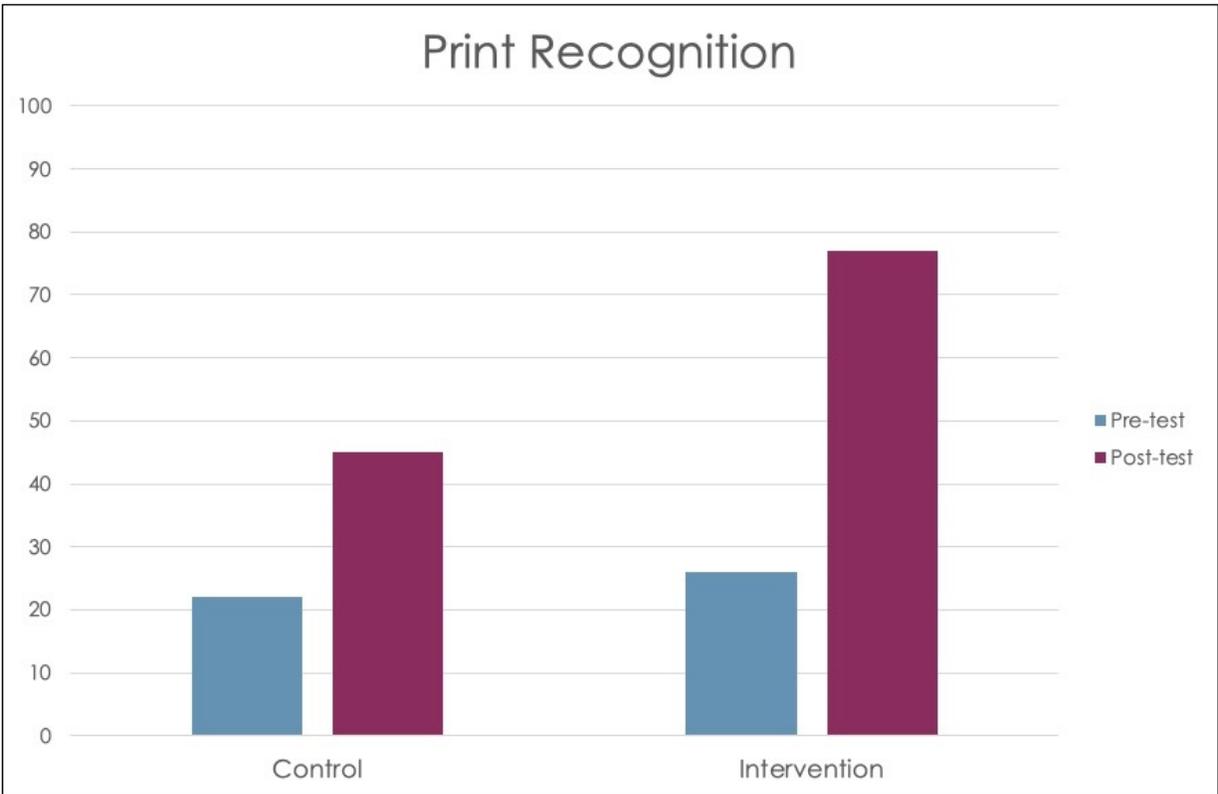
We separated student outcomes into two groups, using results from the Woodcock Johnson Letter Word ID subtest:

Group 1: Good Readers – Students with a standard score of 85 or above, considered typically developing.

Group 2: Struggling Readers – Students with a standard score below 85, considered as below average.

The data were exciting for both groups! Good Readers did well at learning to fingerspell and identify the printed target words almost immediately. Although the Struggling Readers started out by struggling to learn the patterns – they were learning as well as the students in the Good Readers group in later units.

Fingerspelling: The Bridge to Reading Comprehension



Intervention Group recognized 77% of target print words

Based on the positive results of the small study, we implemented a randomized control trial to further investigate the effectiveness of the program. The study included 17 schools and programs and over 45 teachers. We provided initial training and ongoing mentoring throughout the year. The results of that study showed that a curriculum designed to develop fingerspelling phonological awareness skills results in better fingerspelling and better print recognition. It also showed that struggling readers showed more improvement through the year.

During the 2017-18 school year, we included a Reading Comprehension component for all classrooms who were part of the initial study both in the control or intervention groups. The reading component is designed to complement the fingerspelling program and to provide additional reading opportunities using the target words. The reading component provides a pathway for understanding connected English text through repeated opportunities to read the target words in meaningful sentences and original stories.

There is evidence that fingerspelling may provide a pathway to decoding words and strengthening print recognition by building phonological awareness and providing a one to one direct relationship between fingerspelled words and printed English words.

EMPIRICAL MANUSCRIPT

Modality and Interrelations Among Language, Reading, Spoken Phonological Awareness, and Fingerspelling

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Abstract

Better understanding of the mechanisms underlying early reading skills can lead to improved interventions. Hence, the purpose of this study was to examine multivariate associations among reading, language, spoken phonological awareness, and fingerspelling abilities for three groups of deaf and hard-of-hearing (DHH) beginning readers: those who were acquiring only spoken English ($n = 101$), those who were visual learners and acquiring sign ($n = 131$), and those who were acquiring both ($n = 104$). Children were enrolled in kindergarten, first, or second grade. Within-group and between-group confirmatory factor analysis showed that there were both similarities and differences in the abilities that underlie reading in these three groups. For all groups, reading abilities related to both language and the ability to manipulate the sublexical features of words. However, the groups differed on whether these constructs were based on visual or spoken language. Our results suggest that there are alternative means to learning to read. Whereas all DHH children learning to read rely on the same fundamental abilities of language and phonological processing, the modality, levels, and relations among these abilities differ.

Many deaf and hard-of-hearing (DHH) children struggle to learn to read, while others develop age-appropriate skills (Lederberg, Schick, & Spencer, 2013). Understanding the factors that relate to individual differences in reading is critical to designing better interventions and improving reading for all DHH children. One fiercely debated but unanswered question is how much reading relies on children's knowledge of spoken language (Paul & Lee, 2010; Petitto et al., 2016). Because written language encodes spoken language, many claim that DHH children need to acquire spoken language through auditory or visual means. For example, Paul and colleagues (Paul & Lee, 2010; Wang, Trezek, Luckner, & Paul, 2008) posited that all DHH children must use qualitatively-similar processes to learn to read as hearing children. If this is true, reading interventions for DHH children should resemble those for hearing readers with an additional emphasis on increasing children's knowledge of the phonological, semantic, and syntactical features of spoken language.

Others propose that DHH children use different processes to read (Hoffmeister & Caldwell-Harris, 2014; Petitto et al., 2016). This view implies that interventions should differ in substantial ways from those developed for hearing children. There is a third possibility: both hypotheses may be true, but for different DHH children, depending on their acquisition of spoken and signed language (Lederberg et al., 2013; Miller, 2002). Indeed, research suggests that reading processes differ depending on deaf adults' primary mode of communication (spoken vs. signed language) (Hirshorn, Dye, Hauser, Supalla, & Bavelier, 2015; Miller, 2002).

We do not know which of these three hypotheses best explains how young DHH children learn to read. Based on both reading theory and previous research, we hypothesized that DHH children's early reading abilities would be closely related to phonological awareness and language abilities, but the nature of this relation might differ for children acquiring signed and/or spoken language. We tested this hypothesis by

examining the structure of language and literacy skills for 336 young DHH children using confirmatory factor analyses. We hypothesized that, for children who were unimodal visual learners and acquiring sign, reading would relate to children's *fingerspelling* phonological awareness and bilingual (American Sign Language and English) language abilities. On the other hand, for children who were only acquiring spoken language, we expected reading would be related to *spoken* phonological awareness and spoken language abilities. We also included a third group of children: bimodal-bilingual DHH children (acquiring both spoken and signed language) who have not been extensively studied (Davidson, Lillo-Martin, & Pichler, 2014; Marschark, Tang, & Knoors, 2014). We hypothesized that reading for these children would be related to their spoken and fingerspelling phonological abilities, as well as their bilingual (ASL and English) language abilities. How these abilities relate to one another for the three groups of DHH children needs to be better understood and was the main goal of this study. A secondary goal was to show if tests that measured the four constructs (i.e., reading, language, spoken PA, and fingerspelling) were equally good indicators of their hypothesized constructs for children in the three language groups.

Reading Theory

There is widespread consensus on how hearing children learn to read (Lonigan & Burgess, 2017; Seidenberg, 2013). The Simple View of Reading and other more complex theories posit that reading comprehension depends on both word identification and language. Word identification in an alphabetic language requires the acquisition of the alphabetic principle: the knowledge of how to translate letters and printed words into the phonemes of the language. This knowledge is fundamental to phonologically recoding of letters into phonemes and blending them into words, a critical strategy when reading words that are not recognized. Even for sight word recognition, the ability to remember or recognize printed words is facilitated by the storage of sublexical connections between letters and their corresponding phonemes (Ehri, 2014). Acquisition of the alphabetic principle depends on children's phonological awareness ability (Anthony et al., 2002; Seidenberg, 2013). Phonological awareness (PA) is the ability to attend to and manipulate the sublexical structure of words (e.g., syllables, rimes, and phonemes). Research clearly documents that many hearing children who struggle to learn to read have poor phonological awareness skills (Seidenberg, 2013).

Early reading skills also relate to children's language abilities. Children's understanding of the words and sentences they decode depends on their knowledge of vocabulary and syntax (Connor, 2016). The quality of the children's vocabulary knowledge, defined by both the breadth and depth of vocabulary, influences the development of sight word recognition (Perfetti & Stafura, 2014). Children's PA, especially their ability to manipulate phonemes, is also influenced by lexical quality (Braze et al., 2016).

DHH Children's Reading

There is extensive research on the underlying processes of reading of DHH children (see Lederberg et al., 2013; Petitto et al., 2016 for reviews) but most of this research examines DHH children as a single group, regardless of the children's language modality. We hypothesize this type of research is likely to miss important differences in the fundamental skills among DHH children.

The goal of the present study is to compare the structure of reading and language skills for children who differ in language modality (spoken, sign, or both).

Language Modality

DHH children differ on the modality of their language as a function of their language input and their speech perception abilities (Lederberg et al., 2013). DHH children who are exposed to sign in school and/or at home will acquire sign language because there are no sensory barriers to visual language. In contrast, DHH children's speech perception abilities will influence the acquisition of spoken language. Because of cochlear implants and digital hearing aids, many, but by no means all, DHH children have sufficient speech perception abilities to access spoken language. Children who are not exposed to sign language will only acquire spoken language. On the other hand, DHH children who are in signing environments and can perceive spoken language may acquire both spoken and signed language. We follow the example of those who refer to these children as bimodal-bilingual children because they are acquiring two languages in two modes (Davidson et al., 2014). DHH children who are unimodal visual learners (i.e., those who have limited or no auditory abilities) only acquire spoken language to the extent that it can be learned through visual means (e.g., through speech-reading or print). To emphasize their visual acquisition of spoken language, Woll and MacSweeney (2016) also referred to the latter group as bimodal. In this paper, we restrict the term bimodal for those who are able to use both modalities in communication in order to test our assumption that children who sign may differ in how they read depending if they have auditory access to speech. We next review research about these three groups of DHH children.

Children Acquiring Spoken Language

DHH children who are acquiring spoken language are learning to read the language that they can hear. Researchers have found that, as with hearing children, early reading skills of DHH children are correlated with their phonological awareness (PA) and language skills (Cupples, Ching, Crowe, Day, & Seeto, 2014; Webb, Lederberg, Branum-Martin, & Connor, 2015). Overall, correlations among these three constructs tend to be similar and in the moderate to high range (i.e., $r = .60-.80$). A number of studies have examined the relative importance of the two skills for reading with conflicting results. Some researchers have found that PA predicted more variance in reading than language (Cupples et al., 2014). Others have found that language predicted more variance in early reading than PA (Nitttrouer, Caldwell, Lowenstein, Tarr, & Holloman, 2012). Finally, others have found that both vocabulary and PA play a strong and equal role in reading (Dillon, de Jong, & Pisoni, 2012).

These conflicting results may be due to the high intercorrelations among the three constructs. In fact, using confirmatory factor analyses of DHH children's early literacy skills, Webb et al. (2015) found that relations among three constructs (i.e., vocabulary, reading, and phonological awareness) were high and homogenous ($r = .58-.67$), suggesting that PA and vocabulary play complementary and perhaps equal roles in young DHH preschoolers' performance on reading tasks. In a study of elementary-school children with cochlear implants (CI), Dillon et al. (2012) reached the same conclusion. The present study will be the first to use confirmatory factor analyses to examine

the relations among PA, reading, and language in early elementary school.

Children Who are Unimodal Visual Learners and Acquiring Sign Language

Some DHH children do not have auditory access to spoken language, and acquire language only through vision. These children are learning to read a language that differs on every dimension—phonological, semantic, and syntactical—from their first language (Chamberlain & Mayberry, 2008; Hoffmeister & Caldwell-Harris, 2014; Petitto et al., 2016). However, some researchers posit that even these DHH children use some knowledge of spoken English to read. This is supported by research that shows correlations between reading and non-auditory assessments of spoken phonological awareness (Harris, Terlektsi, & Kyle, 2017; Kyle & Harris, 2010). For these children, reading abilities may relate to how well they can use visual means to acquire the phonological structure of spoken language (Kyle, Campbell, & MacSweeney, 2016). They may use mouth movements that provide visual cues to spoken phonology and are a natural part of some sign languages (Petitto et al., 2016; Woll & MacSweeney, 2016). Indeed, reading correlates with DHH children's speech-reading abilities (Kyle et al., 2016). Other researchers have shown that DHH children can develop knowledge and awareness of spoken phonology when teachers use visual-manual systems such as Visual Phonics and Cued Speech to represent spoken phonemes (see Lederberg et al., 2013 for a review). Thus, reading abilities may relate to the ability to develop spoken PA visually.

Other researchers suggest that reading does not require translation into spoken language (Hoffmeister & Caldwell-Harris, 2014; Petitto et al., 2016). DHH readers may directly map the printed word, learned as a sight word, to a sign through an orthographic-semantic pathway (Morford, Kroll, Piñar, & Wilkinson, 2014), prompting many teachers of DHH children to focus on building a large sight word vocabulary. While some DHH readers may be able to use this strategy to learn to read, research with hearing and DHH children suggests that a sight word reading strategy is an ineffective way to read, especially during the early stages of learning to read (Ehri, 2014). In fact, Reitsma (2009) showed that learning to recognize new words through repeated direct associations with sign is a very slow process for DHH children.

Consistent with others, our own theoretical stance is that good reading requires awareness of the sublexical structure of words, and this awareness is fundamental to reading for all children (Lederberg et al., 2013; Petitto et al., 2016). While “phonology” is most frequently used in reference to spoken phonology, linguists studying sign language define phonology more broadly. For example, Brentari (1998) defines phonology as the “sublexical structure that is systematically organized and constrained.” Fingerspelling is one visual phonological system that may support reading. Fingerspelling, which consists of a manual alphabet representing the English print alphabet, is a natural part of ASL and many other sign languages. The phonology of fingerspelling and of signs is related because they use the same articulators (Keane & Brentari, 2016). Importantly, linguists have concluded that fingerspelling can be used as a visual-manual phonological representation of English words when produced fluently as a word (Keane & Brentari, 2016). Fluently fingerspelled words contain some syllable structure depicted by sign-like movement or envelope, while chunking or coarticulation of frequently co-occurring letter sequences aids

comprehension (Brentari, 1998). For example, consonantal clusters (bl, sl, cl, str) or common affixes (-tion, -ness, pre-) are produced as smooth, coarticulated sequences, not distinct letters. Research suggests fingerspelling a word can facilitate learning how to connect a new printed word to a sign. It may also act as aid in recognizing known print words (Haptonstall-Nykaza & Schick, 2007; Hirsh-Pasek, 1987).

While researchers have identified fingerspelling as a possible important link to reading for deaf students, surprisingly few studies have examined its role in learning to read. Researchers (Emmorey & Petrich, 2012; Stone, Kartheiser, Hauser, Petitto, & Allen, 2015) have found that fingerspelling and reading correlate in deaf adults. Some small scale ($n < 30$) studies have found that deaf children's fingerspelling abilities correlate with reading (Padden & Ramsey, 2000; Puente, Alvarado, & Herrera, 2006), while others have not (Chamberlain & Mayberry, 2008; Haptonstall-Nykaza & Schick, 2007). These studies have included DHH students who range widely in age and reading abilities. Therefore, they cannot isolate the contribution of fingerspelling to early literacy—the age when phonological awareness is hypothesized to be particularly important. In addition, these studies often measured fingerspelling very narrowly. For some studies, children matched fingerspelled words to written words, thus confounding fingerspelling with literacy (Padden & Ramsey, 2000). Other studies defined fingerspelling as the ability to imitate fingerspelled words correctly (Emmorey, McCullough, & Weisberg, 2015; Stone et al., 2015). We know of only one study that measured children's ability to manipulate the sublexical structure of fingerspelled words (Hirsh-Pasek, 1987). In the present study, we assessed fingerspelling abilities through three tasks: imitation, blending, and elision. The latter two were designed to be analogous to spoken PA tasks.

Research also suggests that reading is related to sign language abilities. Research has consistently shown that reading correlates with signed vocabulary. Given that readers connect printed words to signs (Morford et al., 2014), it is not surprising that reading abilities correlate with signed vocabulary abilities (Kyle et al., 2016). More controversial is the role of the syntax of sign language. Proponents of bilingual education, especially in the United States, argue that a strong foundation in a natural sign language supports reading skills and that DHH children can learn the syntax of the written language through print (Hoffmeister & Caldwell-Harris, 2014). Others suggest that sign language does not support reading in another language (Paul & Lee, 2010). A third perspective is that deaf children are developing both a natural sign language and contact sign (i.e., signing that resembles written language) and both are mutually supportive of reading (Hermans, Ormel, & Knoors, 2010).

There are a number of reports that sign language syntax skills correlate with reading skills (see Lederberg et al., 2013 for a review). In the present study, we hypothesized that DHH signing children are developing unimodal bilingual abilities (i.e., bilingual abilities in a single [visual] modality). Specifically, we hypothesized that DHH children who are acquiring sign learn both a natural sign language (e.g., ASL) and English-like sign, and that these languages will be integrated and related to reading.

Bimodal-Bilingual Children

Some DHH children are acquiring both spoken and signed languages. These DHH children have sufficient auditory access to acquire spoken language and are in environments where adults use both sign and spoken languages (not necessarily at the

same time). These children's language is considered bimodal-bilingual because they learn two languages and these languages differ in modality (Davidson et al., 2014). There is surprisingly little research on bimodal-bilingual DHH children, and this research is almost exclusively focused on whether signing interferes with spoken language development. Indeed, Hermans et al. (2010) call for more research that assesses both sign and spoken language abilities. We hypothesized that bimodal-bilingual children develop spoken phonological awareness, fingerspelling, and bilingual language abilities (American Sign Language/spoken English) and that these abilities would relate to reading.

The Present Study

While a fair amount is known about reading, language, spoken phonological awareness, and fingerspelling in subgroups of DHH children, less is known about the specific relations among these four constructs for young DHH children who are learning to read. Even more importantly, few studies have examined how language modality might change the relations among these important constructs. For example, it is possible that spoken phonology may have diminished importance and fingerspelling may take on a crucial relation to reading for unimodal signers. The primary purpose of this paper was to examine these four constructs in a sample of children who differ in their access and acquisition of signed and spoken language.

We examined literacy and language skills in 336 DHH children in kindergarten, first, or second grade. The participants included three groups of children who differed in their language modality: (a) children acquiring only spoken language, (b) children who were unimodal visual learners acquiring sign, and (c) children acquiring both spoken and signed language (bimodal).

We used both within-group and multigroup confirmatory factor analyses (CFA) to address the following questions:

- What skills relate to reading abilities in young DHH children in three language groups?
- Is there measurement equivalence across groups? In other words, do the tests measure the four constructs in the same way for each language group?
- Do children in the three groups differ in terms of relations between abilities (correlations), proficiency (means), and individual differences (variances) of their reading, language, spoken PA, and fingerspelling abilities?

Method

Participants

Three hundred and thirty-six DHH children (47% boys) participated in the study. Criteria for participants were (a) enrollment in kindergarten through second grade, (b) hearing loss (better ear-pure tone average or BE-PTA greater than 25 dB), and (c) no severe disabilities (e.g., autism or cognitive impairment). We excluded children when their teachers reported the presence of a severe disability or if they scored more than two standard deviations below the mean on the Differential Ability Scales-II (DAS-II) Matrices subtest (Elliott, 2007; see below).

One hundred and nineteen (35.4%) children had cochlear implants (CI). Among the 217 DHH children who did not have a CI, 15 children (7.7%) had mild hearing loss (unaided Better Ear-Pure Tone Average between 25 and 40 dB), 42 (21.4%) had moderate hearing loss (41–55 dB), 38 (19.4%) had moderately severe

hearing loss (56 to 70 dB), 34 (17.4%) had severe hearing loss (71 to 90 dB), and 67 (34.2%) had profound hearing loss (91 dB or greater). Audiological information was missing for 21 children. Approximately 57% of children were identified with hearing loss before six months of age, 19% between 6 and 23 months, and 12% between age of 24 and 35 months.

Language groups

Children were divided into three language groups based on their auditory access to spoken language and availability of sign language. We determined that children had some auditory access to spoken language if they were able to identify referents of spoken words presented through audition alone on the *Early Speech Perception Test* (ESP; Moog & Geers, 1990, see below). Sign language was available for those children whose teachers signed. Because these two dimensions were orthogonal to each other, there were four possible language groups. The current sample only contained three groups because there were no children who were in spoken-only environments without auditory access. The three groups were:

1. *Unimodal sign group*: Children who did not have auditory access to spoken language and whose teachers signed (with or without spoken language) ($n = 131$). While these children may have received spoken language input, they were visual learners because they had little or no speech perception even with their typical amplification.
2. *Spoken-only group*: Children whose teacher and parents only used spoken language ($n = 101$). All children had auditory access to spoken language.
3. *Bimodal group*: Children who had auditory access to spoken language and whose teachers signed (with or without spoken language) ($n = 104$).

Teachers and examiners (i.e., those who administered study assessments) completed ratings about children's language abilities that indicated our categorization accurately divided our sample. They confirmed that almost all children in the unimodal sign and spoken-only groups used only one language modality. In the sign group, five of the 131 children knew some spoken language but teachers rated these abilities as severely limited. In the spoken language group, there was one child who knew some sign language but teachers' ratings indicated sign was severely limited. Bimodal children showed a range of language use, with 74% using both spoken and signed language, 14% preferred to only use spoken language and 14% preferred to only use sign. While the bimodal children varied in their preferred language modality, they had access to both languages (as evidenced by their speech perception and language environment) and thus were judged to be acquiring both signed and spoken language (to some extent).

Demographic characteristics

Table 1 provides demographic and audiological characteristics of the three groups. Comparisons across language groups showed no significant differences in grade, gender, age of diagnosis of hearing loss or presence of an additional disability. The groups differed in their ethnicity and race, $\chi^2(2) = 6.8, p = .03$ and $\chi^2(8) = 28.9, p < .001$, respectively. The unimodal sign group had more white and fewer black children compared to the other groups, and the spoken-only group had more black and fewer Hispanic children than the other groups. Other group differences were expected. The three groups differed on parental hearing status, $\chi^2(2) = 50.9, p < .001$. Children in the spoken-only group were more likely to have a cochlear implant than the other groups, $\chi^2(2) = 30.3, p < .001$. According to teacher report,

Table 1 Demographic and audiological characteristics of participants

Variable	Spoken	Bimodal	Sign	Sample mean
Mean age in years (SD)	6.6 (1.0)	6.6 (0.9)	6.8 (1.0)	6.7 (1.0)
Grade				
kindergarten	50	38	34	40
First	28	36	34	33
Second	23	26	31	27
Ethnicity: Hispanic	23	39	30	31
Race				
White	44	55	63	55
Black	26	17	11	17
Asian	7	3	8	6
Other	14	20	8	13
Home language				
Spoken English only	69	30	14	36
ASL only	0	9	41	19
ASL + spoken English	3	30	28	21
Spoken language only-not English	12	9	7	9
Bilingual Spoken	15	8	2	8
Deaf or hard-of-hearing parent	7	23	50	29
Timing of hearing loss				
Congenital	52	76	82	65
Acquired	11	4	5	6
Don't Know	35	21	27	28
Audiological technology				
Unilateral CI (with or without HA)	20	25	14	19
Bilateral CI	35	10	7	15
Hearing aid(s)only	45	56	47	51
None	1	3	30	13
Additional disability (any)	25	30	19	25
Disability (attention)	8	8	5	7
Disability (cognitive)	4	4	2	3
Disability (motor)	13	11	6	10
Disability (emotional/behavior)	2	5	4	4
Differential Ability Scale T score M (SD)	46.7(8.1)	46.7 (9.1)	45.9 (8.1)	
Early Speech Perception				
No pattern perception	0	0	93	39
Pattern perception	0	0	7	1
Some word identification	1	1	0	2
Consistent word identification	99	98	0	58
Level of speech articulation impairment				
None	53	25	-	37
Mild	24	13	-	18
Moderate	21	28	-	25
Severe	2	34	-	20

Note. All numbers are percentages within each language group and for the entire sample, except where noted otherwise. Percentages may not sum to 100 due to rounding.

100% of children in the spoken-only group, 97% of children in the bimodal group, and only 65% of children in the unimodal sign group *almost always* used their CI at school; 27% of children with CI in the unimodal sign group *never* used their CI. For those using hearing aids, 96% of children in the spoken-only group, 94% of children in the bimodal group and only 51% of children in the unimodal sign group *almost always* used their hearing aid (s) at school. Instead, 45% of the latter group *only occasionally* used their hearing aids.

Classes and teachers

Data were collected from children in 103 classes located in 40 schools in nine states and one Canadian Province. These programs were located in a variety of educational programs including 18 schools that served only DHH children (2 charter schools,

1 federally funded school, 6 private schools, and 9 state-funded schools) or in 22 public elementary schools that served DHH and hearing children. There were many more children in the schools for the deaf than in the public elementary-school programs. Thus, while the sample was almost evenly split between schools for the deaf and local elementary-school programs, 87.5% of the children were in self-contained classes that served only DHH children; 12.5% were educated in settings that included hearing children. 85% of the children had teachers who had a master's degree; the rest had teachers with bachelor degrees. They had, on average, 11.26 (S.D. = 9) years experience of teaching DHH children. Teachers of children who signed (i.e., unimodal sign and bimodal groups) reported using ASL alone (62%), using both ASL and Signed English (27%), and only signed English (11%).

Measures

Speech perception

On the ESP (Moog & Geers, 1990), examiners asked children to select referents of spoken words using an acoustic hoop to prevent speech-reading. Performance was classified into four categories: 1 = no pattern perception, 2 = pattern perception, 3 = some word identification, and 4 = consistent word identification.

Speech articulation

On the *Arizona Articulation Proficiency Scale-3* (Fudala, 2000), children were asked to supply a spoken word for a series of pictures. Speech pathology graduate students scored responses from videos. Raw scores were converted to degree of speech articulation impairment based on age norms provided in the manual.

Nonverbal IQ

Examiners administered the DAS-II Matrices subtest (Elliott, 2007). Children were asked to select a picture that fits the pattern of a matrix. Raw scores were converted to T-scores. The norming population has a mean of 50 and a standard deviation of 10.

Reading

We used three measures to assess the Reading construct. The *Woodcock-Johnson Tests of Achievement-III* (WJ-III, Mather & Woodcock, 2001) Letter-Word Identification (Letter-Word Id) requires children to identify letters and single words. On the WJ-III Passage Comprehension (Passage Comp), initial items require a child to match a rebus with a picture, the next set of items require a child to match short phrases to the appropriate picture among three pictures, and the final set requires a child to provide a missing word in sentences and paragraphs (i.e., cloze technique). Standard ceiling and basal rules were used. For both tests, spoken and/or signed words were acceptable.

The third test measured reading fluency (Fluency). Examiners presented three passages in order of difficulty. The first passage came from the primer (kindergarten) level of the *Reading Mastery Rainbow Edition* (Englemann & Bruner, 1995). The next two passages (one first grade and the other second grade) came from the Florida Center for Reading Research (www.fcrr.org). Examiners only gave the next passage if children met the reading fluency criteria for the previous passage. All passages were followed by one comprehension question. Because it takes longer to sign than to speak, we set different reading fluency criteria depending on children's language use. Children who used spoken language had to read at least five sentences in 60 seconds, while children who signed had to read at least four sentences in 90 seconds to go on to the next passage. We scored the number of passages read fluently.

Spoken phonological awareness

We used three subtests from the *Comprehensive Test of Phonological Processing* (CTOPP; Wagner, Torgesen, & Rashotte, 1999) to assess children's phonological awareness abilities. Examiners delivered directions in the child's preferred modality, but used only spoken language for test items. Because they required spoken language abilities, Elision and Blending were administered only to the spoken-only and bimodal groups. Elision required children to say the remainder of a word when a sound was dropped (e.g., "farm without saying /f/"). Blending required children to combine spoken sounds to form words (e.g., "s-ün"). Sound Matching required children to select the picture that matched the initial or final sound of the target

picture (e.g., "Which word starts with the /n/ sound like neck? Nut, bed, or cake?"). Not surprisingly, given Sound Matching was designed to test early phonological awareness, all initial sound and all but two final sound-matching words also started or ended with the same written or fingerspelled letters. With the addition of signing the directions when appropriate, assessors used standard administration as described in the manual. Following the manual, examiners stopped administration of a subtest when a child was incorrect on all practice items and a score was not given for that subtest.

Fingerspelling phonological awareness

The *Fingerspelling Ability and Phonological Awareness Test* (FS-PAT; Schick, 2012) was used to assess fingerspelling skills and phonological awareness in fingerspelling. The FS-PAT was administered only to the sign-only and bimodal groups. Items on the FS-PAT were presented via a laptop with stimuli signed by a native Deaf signer. For each subtest, the examiner gave directions using an ASL script. Each subtests had two practice items. Fingerspelling Imitation (F. Imitation) required children to imitate a series of fingerspelled real words of increasing length and difficulty (first item = car, last item = caterpillar). Fingerspelling Blending (F. Blend) and Elision (F. Elision) subtests were modeled after items on the CTOPP blending and elision subtests. For F. Blend, children were required to blend handshapes into a real word; it included eight items of increasing difficulty (first item = t-oy, last item = g-r-a-ss-h-o-pp-e-r, with hyphens showing the segmentation). The Deaf signer paused slightly between the segments as well as spatially separated the segments. F. Elision required children to fingerspell a new word after removing a fingerspelled chunk from a fingerspelled model. The Deaf signer fingerspelled a word and instructed the child to delete a specific fingerspelled segment or letter. It included eight items of increasing difficulty (first item = popcorn without—corn, last item = strain without—r).

Language

We used the *Expressive One-Word Picture Vocabulary Test-4* (EOWPVT; Martin & Brownell, 2011) to measure children's expressive vocabulary ability. EOWPVT required a child to name (using either speech or sign or both) pictures of increasingly unfamiliar items. Examiners used standard basal and ceiling rules; however, the examiners used a list of acceptable signs to score children's signed responses. We used the *Elaborated Phrases and Sentences* subtest of the *Test of Auditory Comprehension of Language-3* (TACL; Carrow-Woolfolk, 1999) to assess children's abilities in receptive English grammar and word order at the sentence level. Assessors administered items in spoken English, voice-off English-like signing, or simultaneous spoken and signed communication (SimCom), depending on child's preferred communication method. Assessors signed the sentences in English word order but did not sign English morphemes (e.g., -ed, -s). Children had to select the correct picture from three choices. We administered the *Word Structure of the Clinical Evaluation of Language Fundamentals-4* (CELF; Semel, Wiig, & Secord, 2003) to assess children's abilities in expressive spoken English inflectional morphology. The test used cloze-set items to elicit expressive morphology. Standard administration procedures were used for the children in the spoken-only group. Examiners administered stimuli to children who sign using SimCom. Children had to produce the word with the correct morphology, using either speech, English signed morphemes, or fingerspelling. We used the *ASL Receptive Skills Test-Revised* (Schick, 2013) to measure DHH children's ability to understand

ASL syntax and classifiers at the sentence level. Examiners administered this test only to the sign-only and bimodal groups. Children watched a video of a model signing ASL sentences and selected a picture from a closed set of three, four, or six pictures.

Procedures

Our test battery included tests developed for hearing children. We adapted these tests for use with signing children by having a team of experts that included native Deaf and hearing signers create videos of standardized directions, items (e.g., sentences on the TACL), and a list of acceptable signed responses (all available from first author). Examiners were teachers or speech-language-pathologists and had expertise in the children's language. The examiners were extensively trained in administration procedures and the accommodations based on children's language knowledge (e.g., acceptable sign in vocabulary assessments) during a 2-day training workshop. Examiners who administered the tests to signing children were provided videos of a deaf examiner and administered the tests to the fourth author, a native signer, for approval.

We recruited schools primarily from the home or neighboring states of the research team. We targeted schools that had a concentration of DHH children. We obtained appropriate Institutional Review Board approval to use parent notification for this study. This meant that we were able to assess all children who met eligibility criteria in these schools. During the fall, examiners administered tests individually in a quiet, familiar room in the school building.

We maintained data integrity in four ways. Examiners doublechecked their live scoring by watching videorecordings. Graduate students rescored expressive items on language and reading assessments for 20% of children randomly chosen (blocked by modality). Interrater agreement between examiners and students was excellent: EOWPVT $r = .99$, LetterWordID $r = .86$; PassComp $r = .99$; CTOPP blending $r = .91$; CTOPP Elision $r = 1.0$. Graduate students independently calculated test scores twice and conferred with a third researcher to resolve discrepancies. Finally, graduate students independently entered scores twice into the database and discrepancies were resolved by the third author.

Statistical Analysis

Whereas the three groups were administered many of the same measures, some measures were not administered based on the group's spoken or sign language knowledge, following a known-missing design (Widaman, Grimm, Early, Robins, & Conger, 2013). Examiners did not administer the fingerspelling and ASL tests to children who did not know sign (the spoken-only group) or the tests that required spoken responses to children in the unimodal sign group. Expressive English Syntax was administered to all children but excluded from the analyses for children in the signing groups because children, on average, performed at floor. Figure 1 shows a schematic form of the a priori confirmatory factor model to be fit, including factors for Reading, Fingerspelling, Spoken PA, and Language. The four latent factors are shown as circles and the 13 tests are shown as rectangles, present or absent for their respective groups. Each test is intended to measure the respective factor (or construct) as shown by the arrows, and all factors have correlations which are freely estimated. These latent correlations represent

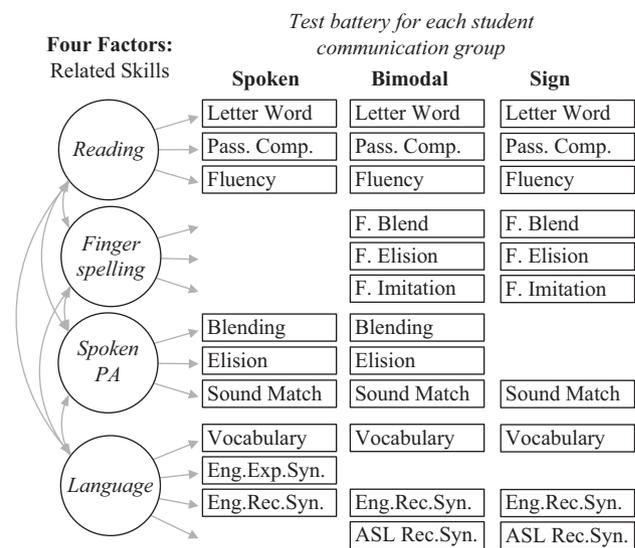


Figure 1 Schematic representation of the planned-missing design for test administration and the intended four-factor model for each group.

relations between factors after removing measurement error due to the separate tests.

We used CFA to test the model fit for a structure with four factors: Reading, Fingerspelling, Spoken PA, and Language. Models were initially fit in SAS PROC CALIS (SAS Institute Inc., 2014), which allows for unequal numbers of measures, and then fit in Mplus (Muthén & Muthén, 2012), with constraints to force non-administered measures to be effectively missing in the appropriate groups (Widaman et al., 2013). This model is a planned-missing design, in which a joint model is fit across groups without all groups having the same measures. Tests each represent a sample of all possible measures of a factor (standard CFA) in each group. The current planned-missing design allows us to evaluate a joint model across groups, estimating factor scores using only the tested measures. The basis for such estimation is standard full-information maximum likelihood. Preliminary models were tested with complete measures across both software programs to ensure comparable solutions, and estimated via full-information maximum likelihood.

Because our goal is to understand the functioning of these tests within as well as across groups, we present two sets of analyses: within-group CFA and a multiple-group CFA. Fitting models separately can highlight distinctions missed in a joint model, while a joint model can highlight commonalities that otherwise might be missed. In fitting a multiple-group model, the emphasis is on distinguishing measurement differences due to tests (e.g., bias) from genuine differences due to students (e.g., in the means or variances of the factors).

Within-group CFA

We fit the four-factor model shown in Figure 1 to each group to evaluate its fit and validity to describe the structure of language and literacy abilities among these tests with the fingerspelling factor not modeled for the spoken language group.

Multiple-group CFA (measurement invariance)

We tested this model for across-group equality of measurement parameters so that factor scores and their relations could be compared across groups. For testing measurement equivalence across groups, we used a standard sequential

process (Vandenberg & Lance, 2000). Specifically, we tested to see if the groups were equivalent for five nested models: Model 1—configural (factor structure) invariance, Model 2—metric (loading) invariance, Model 3—scalar (intercept) invariance, Model 4—equality of factor covariances, and Model 5—equality of factor means. This sequence of five models evaluates the following respective hypotheses of equality across the three groups: (a) Tests aligned with their factors in the proposed, theory-based configuration. (b) Tests measured their factors on an equivalent metric (i.e., in the same units). (c) Tests had the same model-implied means. (d) Factors had the same variance and covariance, and (e) Factors had the same group means.

Model fit

Evaluating CFA is a complex issue with many guidelines, but no single, objective criterion for model fit (Marsh, Hau, & Grayson, 2005; Marsh, Hau, & Wen, 2004). There are several indices to evaluate, and these must be considered relative to comparable models in this particular field. Multiple-group testing is complex, with several common indices being overly stringent (Chen, 2007; Cheung & Rensvold, 2002) and little guidance beyond the two-group case—we are testing across three groups. There are multiple criteria recommended and we will report those in our evaluations of fit (see Chen, 2007). While there are few, if any, reported CFA models for DHH children (Webb et al., 2015), we follow guidelines of comparative fit index (CFI) near .90 and the root mean square of error of approximation (RMSEA) and the standardized root mean square residual (SRMR) near .10.

Results

Description of the Three Language Groups

Cognitive and speech abilities

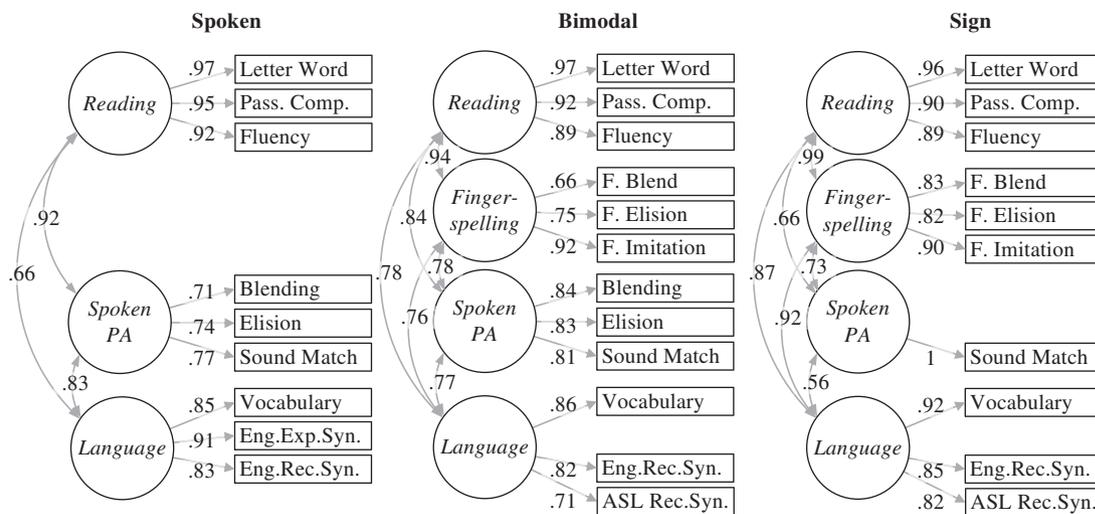
The three groups scored in the average range on the DAS-II Matrices subtest (see Table 1), with no group differences. As expected, the groups differed on their speech perception and speech articulation abilities (see Table 1).

Language and literacy abilities

Table S1 (available online) displays descriptive statistics and internal consistency reliability (Cronbach’s alpha) for the 13 measures in each of the three groups (see Antia et al., 2019, for descriptive statistics of standard scores for tests that have norms). Dashes indicate that the measure was not administered for that group. Estimates using full-information maximum likelihood for the missing tests were at floor (or slightly negative), suggesting our choice not to administer these tasks was an ethical decision to minimize children’s frustration. Model-based reliability (R²) is presented in Table S6. Reliabilities for our assessments were moderate to high.

Table S2 (available online) presents correlation matrices for each of the three groups among the 13 measures. Correlations within constructs were high and homogeneous, conforming to the four blocks of variables designed to measure reading, fingerspelling, spoken PA, and language. The correlations were somewhat mixed and heterogeneous across constructs.

We organize our results in the order of our three research questions.



Fit statistics for tests for models tested within groups

Model	Group	χ ²	df	CFI	RMSEA	(90% CI)	SRMR
Four Factor	Spoken ^a	57.3	24	.956	.117	(.078 – .157)	.045
	Bimodal	134.5	48	.907	.132	(.106 – .158)	.078
	Sign	63.1	30	.970	.092	(.060 – .123)	.037

Note. CFI = Comparative Fit Index. RMSEA = Root Mean Squared Error of Approximation, with 90% confidence interval in parentheses). SRMR = Standardized Root Mean Residual.

^aThe four-factor model for the Spoken group did not include a factor for Fingerspelling and is therefore equivalent to a three-factor model

Figure 2 Four-factor results from each of the separate groups (fully standardized results; mean structure not shown). Fit statistics for tests for models tested within groups.

Research question 1. *What skills relate to reading abilities in young DHH children in three language groups?* We answered this question with within-group and multigroup CFA.

Within-Group CFA

We examined the degree to which the hypothesized four-factor model for unimodal sign and bimodal groups and three-factor model for spoken-only group fit the data. Figure 2 shows fit indices for each model for the three groups. Model Fit for the spoken-only group (for three factors) and for the unimodal sign group (for four factors) was good with CFI > .95, SRMR < .05, and RMSEA close to .10. The fit for the bimodal group was marginal (CFI = .91; SRMR = .08; RMSEA = .13). We judged the global fit to be reasonable.

The fully standardized estimates from the four-factor model fit to each group are shown in Figure 2. The standardized loadings on the straight arrows represent the correlation between measures (rectangles) and factor (circles). Figure 2 shows that these loadings are all generally high, suggesting that the measures are good indicators of the underlying factors for all three groups. The loadings were particularly high for the reading measures with loadings above .89. The loadings for the language factors were also high with all but one measure above .82. ASL and English receptive syntax had high loadings on the language factor for both the bimodal and unimodal sign groups. Measures for fingerspelling and for spoken PA loaded well on their respective factors.

The curved arrows between factors in Figure 2 represent the correlations between factors. For the spoken-only group, reading was highly correlated with spoken PA (.92), and moderately correlated with language (.66). For the bimodal group, reading was highly correlated with both fingerspelling (.92) and spoken PA (.84), and moderately correlated with language (.78). For the unimodal sign group, reading was highly correlated with fingerspelling (.99) and language (.87), and only moderately correlated with spoken PA (.66). In the latter two groups, fingerspelling was moderately correlated with spoken PA (.78 and .73, respectively).

Multiple-Group CFA

Research question 2. *Is there measurement equivalence across groups? In other words, do the tests measure constructs in the same way for each language group?*

Based on these initial four-factor within-group models, a joint, multiple-group four-factor model was fit, but had serious estimation problems because of the high correlation between fingerspelling and reading. We, therefore, modified the model to three factors, placing the fingerspelling and reading measures as indicators of a single broader factor that we call literacy.

Table 2 presents the tests of measurement invariance using this three-factor structure. As the table shows we tested measurement invariance for four nested models. The fifth model tests for full equality of latent means across groups. The columns of Table 2 show fit indices, along with differences (Δ) comparing each model to the less restricted model above it (Chen, 2007).

The first line of Table 2 shows that this modified three-factor model fit reasonably well, with some degree of misfit (CFI = .94; RMSEA = .11; SRMR = .17). While the fit of this model was not ideal, the substantive interpretation matches theoretical expectation with good loadings and interpretable latent correlations. We, therefore, retained the three-factor model of literacy (that included both reading and fingerspelling), spoken PA, and language as the most reasonable across the groups.

In the second row of Table 2, we show the tests of equivalence of factor loadings to identify group differences in the scales or variances of the latent factors. In the third row, we tested equivalence of regression intercepts. Based on changes in CFI, RMSEA and SRMR (Chen, 2007), we suggest that Model 3, which imposes equality across groups for intercepts and loadings, fit reasonably. Model 3 suggests that the factor structure, loadings (i.e., correlations between measure and factor) and intercepts (i.e., the model-implied means) of the 13 measures were similar across the three groups.

In the bottom two rows of Table 2, we present tests of across-group equality for the latent variance-covariance matrix (Model 4) and latent means (Model 5). Chen (2007) does not provide explicit alternative criteria for testing across-group factor structure, but recommends that SRMR can be informative. Model 4 had a large change in CFI, SRMR, and BIC. Model 5 resulted in a large change in CFI but little else. Because Model 4 had several indices of poor fit, we retain Model 3 of intercept invariance as the final model for examination of group differences in factor scores (both correlations between factors and latent means of those factors).

The results of this Model 3 of intercept invariance are presented in Figure 3. The groups are shown as before, left to right: spoken-only, bimodal, and unimodal sign. For each group, fully standardized results are shown. Table 3 shows the latent factor correlation matrix, the latent means, and latent standard deviation for each group (relative to the spoken-only group, SD = 1).

Because Model 4 of full equality of latent covariance was rejected, we next tested group differences to address the third research question.

Research question 3. *Do children in the three groups differ in terms of relations between abilities (correlations), proficiency (means), and individual differences (variances)?*

Table 2 Tests of measurement invariance for the three-factor model across groups

Model	χ^2	df	CFI	RMSEA	SRMR	BIC	$\Delta\chi^2(\Delta df)$	Δ CFI	Δ RMSEA	Δ SRMR	Fit 1	Fit 2
1. Configural	271.8	116	0.944	0.110	0.166	15,704						
2. Metric (loadings)	319.7	128	0.931	0.116	0.173	15,682	47.8 (12)	-0.013	0.006	0.007	Yes	Yes
3. Scalar (intercepts)	413.8	140	0.902	0.132	0.174	15,706	94.2 (12)	-0.029	0.016	0.001	No	Yes
4. Latent covariance	437.3	146	0.895	0.133	0.184	15,695	23.4 (6)	-0.007	0.001	0.010	n/a	n/a
5. Latent means	495.6	152	0.876	0.142	0.191	15,718	58.4 (6)	-0.019	0.009	0.007	n/a	n/a

Note. CFI = Comparative Fit Index. RMSEA = Root Mean Squared Error of Approximation. SRMR = Standardized Root Mean Residual. BIC = Bayesian Information Criterion. "n/a" = not applicable. Each model is tested relative to the one above it. "Fit 1" and "Fit 2" refer to Chen's (2007) criteria for invariance testing. n/a = not applicable. All chi-square difference tests were statistically significant ($p < .01$), but are likely overpowered (Chen, 2007). The metric model (2) passed both criterion 1 and criterion 2 for loading invariance. Model 3, which tested for intercept invariance failed Chen's criterion 1 (CFI and RMSEA differences were both too high), but passed Chen's criterion 2 for SRMR.

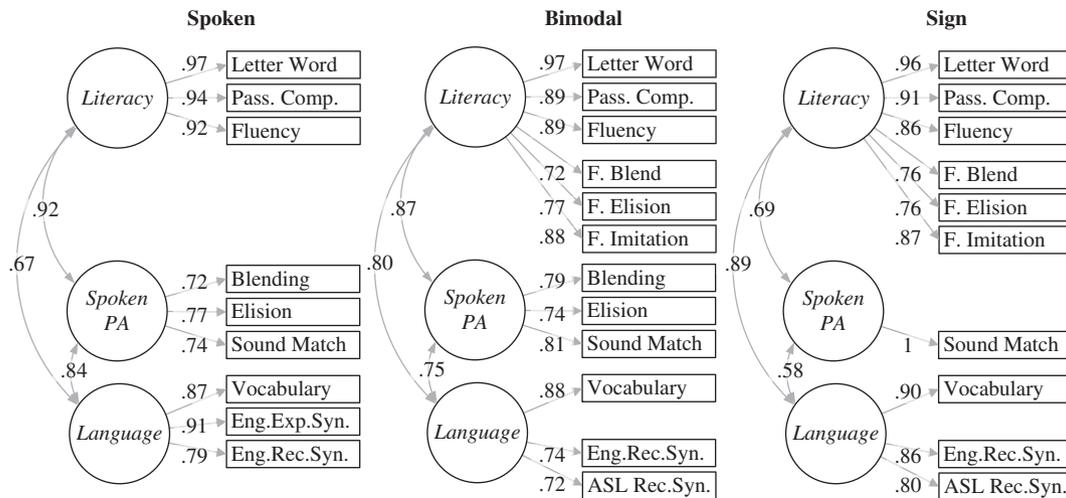


Figure 3 Three-factor, three-group model with scalar invariance (fully standardized results; mean structure not shown).

Table 3 Latent correlations, SD, and means from the three-factor, three-group model of scalar invariance

Group	Factor	Literacy	Spoken PA	Language
Spoken	Literacy	1		
	Spoken PA	0.92	1	
	Language	0.67	0.84	1
Bimodal	Literacy	0.83		
	Spoken PA	0.87	1.08	
	Language	0.80	0.75	0.96
Sign	Literacy	0.78		
	Spoken PA	0.69^c	1.02	
	Language	0.89^c	0.58^c	1.20
Means	Group	Literacy	Spoken PA	Language
	Spoken	0	0	0
	Bimodal	-0.19	-0.52 ^{ab}	0.00
	Sign	-0.26 ^a	-1.14 ^a	-0.12

Note. Correlations appear in boldface, SD in italics on the diagonal, and means at bottom of the table. These estimates are from multi-group three-factor Model 3 in Table 6 and Figure 3. The scales of the latent factors were set to those of the Spoken group (mean = 0; variance = 1).

^aStatistically significantly different from the mean of the Spoken group ($p < .05$).

^bStatistically significantly different from the mean of the Sign group ($p < .05$).

^cCorrelation significantly different from that in the Spoken group ($p < .01$).

We next tested each factor for differences across groups: correlations via Fisher's Z-test and latent means by a t-test, reported in Table 3 (each calculated within Model 3, using MODEL CONSTRAINT in Mplus to test for statistical significance of the differences). The correlation between Literacy and Spoken PA did not differ between the spoken-only and bimodal groups ($r = .92$ and $.88$, respectively), but was significantly lower for unimodal sign group ($r = .69$). The correlation between Language and Spoken PA was also lower for unimodal sign than for the spoken-only group. On the other hand, the correlation between Language and Literacy was significantly higher (.89) for the unimodal sign than for the spoken-only group (.67). As shown in Table 3 and Figure 4, the three groups did not significantly differ in their means for Language. In contrast, all three groups differed significantly from each other in spoken PA. For Literacy, the unimodal sign group differed from the spoken-only group. Figure S1 (available online) combines the mean information from Table 3 with the correlations from Figure 3 in a compact layout.

Figure 4 allows for visual comparison of the three groups' performance, using estimated factor scores for each student. The Language boxplots in the top panel show the high degree of similarity across groups, both in their level and spread of scores. The middle panel shows the strong differences in Spoken PA: the unimodal sign group in particular has lower scores and is highly homogeneous. However, some extreme scores in this group overlap with high-scoring children in the Bimodal and Spoken-only groups. Finally, the lower panel shows boxplots for Literacy, showing the high degree of overlap across groups, though the Spoken-only group has a larger spread of scores, especially above average.

Tables S3–S6 are available online to provide additional statistical information. The estimates of loadings and intercepts from the final Model 3 are shown with standard errors in Table S3. The estimates in Table S4 in this three-factor model of measurement equivalence are reasonably close to those in Table S3, based on the four-factor model not imposing measurement equivalence. Table S5 reports residual variances. Table S6 reports R^2 values.

Discussion

The goal of this study was to describe the multivariate relations among language and literacy skills for three groups of DHH children who differed in their language modality. While other researchers have contrasted the reading processes of oral deaf adults and those who sign (Hirshorn et al., 2015; Miller, 2002), this is the first study to examine differences in young children who are learning to read. It is also the first of its kind to compare these groups with bimodal DHH children. Our results confirmed our hypothesis that all DHH children learning to read rely on the same fundamental abilities of language and phonological processing but the modality, levels, and relations among these abilities differ.

Multivariate Relations for Three Language Groups

Our first analysis examined children's language and literacy skills within each of our language groups. The results were consistent with our theoretically driven models of three factors for the unimodal spoken group and four factors for the bimodal and unimodal sign group. We describe the constructs, the

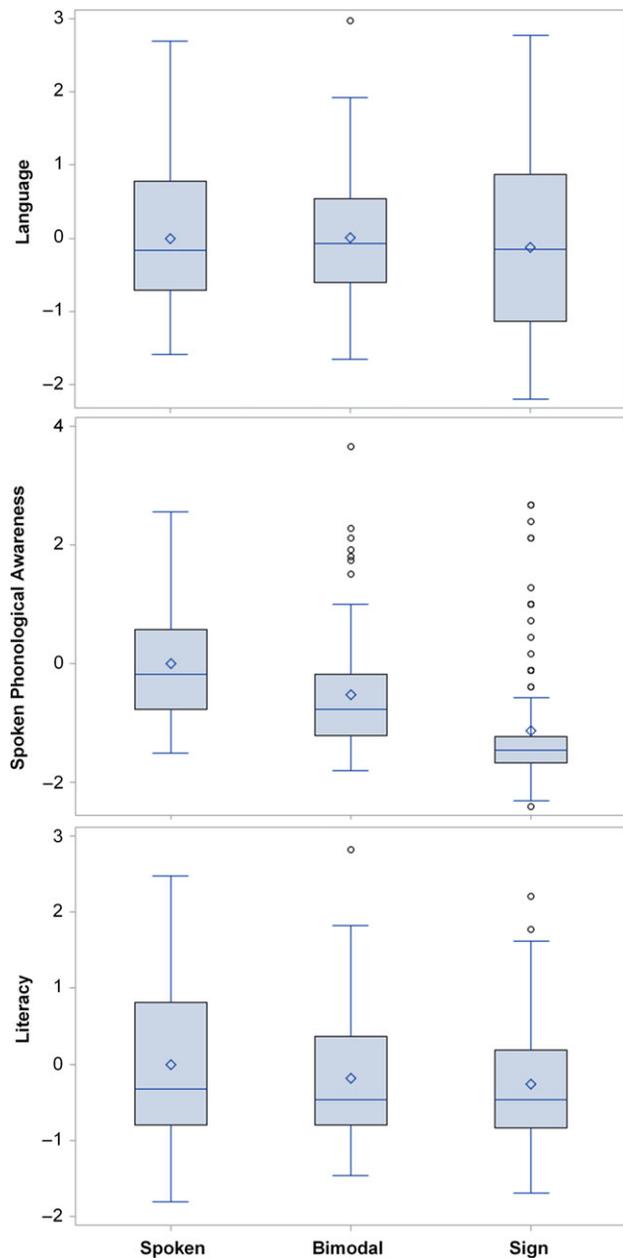


Figure 4 Factor scores for each group on each of the three factors. *Note.* These are descriptive boxplots for the summary statistics of factor scores reported in Table 3. The box is between the first and third quartile, the median is indicated by the middle line, the mean is the diamond, while the ends (whiskers) represent data within 1.5 times the interquartile range (circles represent scores outside this range).

implications of the models for the constructs' indicators (i.e., tests), and relations between reading the other constructs in the following section.

Language

We assessed expressive vocabulary and receptive grammatical knowledge. While these assessments required children to answer using different modes (expressive vs. receptive) and different domains of language, they all formed one integrated language construct, with high factor loadings for all measures. This was true for all three language groups despite differences in the language or modality assessed (ASL vs. English; sign vs. spoken).

For the spoken-only group, all three measures reflected children's knowledge of the English language. For the other two groups, we included measures of both English and ASL grammar. These measures had high and equal loadings on the language construct. This suggests that both groups of signing children were bilingual. This was not surprising for the bimodal group; they were in signing environments but had some auditory access to spoken English. Importantly, the same pattern of loadings was found for the unimodal sign group, indicating that these children may also be bilingual, even when they were not bimodal. Some researchers have posited that unimodal sign DHH children become bilingual by acquiring English knowledge from print (Hoffmeister & Caldwell-Harris, 2014). However, the DHH children in this study were beginning readers so it is unlikely that they learned English grammar from print. Instead, we hypothesize that they are acquiring English from adults in their community who use contact sign as well as ASL (Lucas & Valli, 1991). Our English receptive syntax test required children to understand English word order, including complex grammar. The language on this task was more complex than that on the passage comprehension reading test. While we did not test their English grammatical system fully, our results suggest high consistency in the way DHH children performed on these seemingly disparate language tasks. It may be that this knowledge can be leveraged to assist children in their acquisition of literacy (Hermans et al., 2010). Because we had only one indicator of the signing children's English language abilities (i.e., English receptive syntax), our findings should be considered suggestive and in need of further research.

Research with young hearing children has also found that language is unidimensional (Language and Reading Research Consortium, 2015). The Consortium concluded that, despite the fact that vocabulary and grammar are separate aspects of language, they measure a unitary, integrated language ability during early elementary school. This is consistent with theories of language development that posit the interconnection between lexical and grammatical development. Our results suggest this is also the case for DHH children.

Spoken PA

The three tests that measure children's ability to blend, segment, and identify phonemes in spoken words formed an integrated construct for both spoken-only and bimodal groups. Our results are similar to research with both DHH and hearing children that show that different phonological awareness tasks (e.g., rhyming, blending) measure one underlying PA ability (Anthony et al., 2002; Webb & Lederberg, 2014).

The blending and elision PA tasks required spoken language abilities; the sound-matching task asked children to select pictures of words that share a phoneme. The latter could be completed without spoken language and resembles how other researchers have assessed PA with DHH children (Kyle & Harris, 2010). The high loadings for all three tests on the spoken PA construct for the spoken-only and bimodal group suggests the matching task is a good measure of PA, and thus, may be a valid test to assess spoken PA in unimodal signing children.

Fingerspelling phonological processing

Fingerspelling was measured in both signing groups. We used three novel tasks to measure fingerspelling. We included a measure of phonological memory, the ability to imitate fingerspelled words that increased in length. We also included two measures of fingerspelling PA that required children to blend spaced fingerspelled words, or remove a fingerspelled letter to create a

new word. Our results confirmed that these tasks measure one underlying construct that we define as fingerspelling phonological processing. Past researchers have only included one measure of fingerspelling ability and that measure is frequently one of phonological memory. Our study confirms that fingerspelling abilities include the ability to manipulate fingerspelled words through blending and elision. By including three tests, we were able to measure how it related to measures of language and reading.

Reading

Reading ability was measured by tests of word reading, reading comprehension, and fluency. These three tests had similarly strong associations (i.e., all more than $\geq .89$) with the Reading factor for all three groups. Most theories, including the Simple View of Reading, posit that word recognition and reading comprehension are separate constructs, with language comprehension more important for the latter than the former. However, in a test of this hypothesis with a large sample of hearing children, Lonigan and Burgess (2017) found that measures of children's ability to recognize words and to understand sentences and passages formed one factor (reading) for students in kindergarten to second grade. They found that children's word reading skills and reading comprehension formed two distinct constructs only with older children (third to fifth grade), suggesting that this represents a developmental process, where comprehension only becomes separate from word reading when word decoding is no longer the roadblock to reading. In our study, we found that reading fluency also loaded essentially equally with word recognition and reading comprehension on the reading factor.

Despite the fact that these tests were created for hearing children, they measured reading in all three groups of DHH children, regardless of spoken or signed response. This is somewhat surprising given that the act of reading is different for children who use spoken vs. signed language. Indeed, using a large data set of 950 DHH children, Webb, Branum-Martin, and Lederberg (2017) found that WJ Letter-Word ID and WJ Passage Comp had similar psychometric properties for the three language groups (including item difficulty and sensitivity). Factor loadings also suggest that our accommodation allowing longer response time on the reading fluency test for children who signed, still yielded equivalent tests across language groups.

Relations between constructs

The within-group models also estimated relations among the constructs. For the spoken-only group, reading abilities had a strong ($r = .92$) relation with spoken PA but only a moderate relation with ($r = .67$) language. This is consistent with research with both hearing (Lonigan & Burgess, 2017) and DHH beginning readers (Cupples et al., 2014; Webb et al., 2015) that shows that the ability to manipulate the sublexical structure of words is critical for learning to read an alphabetic script like English. This finding disputes the work of researchers who argue that language is more important than PA for DHH readers (Harris et al., 2017; Nittrouer et al., 2012). The latter researchers have included older children and differences may reflect the decreasing role of PA after children have learned the alphabetic principle.

For the bimodal group, reading was also strongly related to abilities to manipulate the sublexical structure of words, as reflected by both fingerspelling PA ($r = .94$) and Spoken PA ($r = .84$) abilities. These two phonological skills were also correlated with each other ($r = .78$) for children acquiring both spoken and

signed languages. Although we have posited that fingerspelling phonological processing may serve as a functional alternative to spoken PA, the two skills also may support each other, at least for bimodal children (Petitto et al., 2016).

For the unimodal sign group, reading was almost perfectly correlated with fingerspelling ($r = .99$). Unimodal sign children's reading abilities were also highly related ($r = .87$) to their language abilities, but less so, but still significantly, with spoken PA ($r = .66$).

Across-Group Comparison

The second analysis, using multi-group CFA, examined the extent to which all the features of the model shown in Figure 2 were the same across the three language groups. Specifically, we tested the equivalence of overall structure, relations of tests to constructs (loadings), model-implied means of those tests (intercepts), and differences among the latent factors across groups (factor means, variances, and correlations).

Configural invariance

A four-factor model was supported within each group, but the model could not be fit in a joint, multiple-group model. Instead, the high correlation between Fingerspelling and Reading ($r > .93$) suggested that a simpler three-factor model was necessary for comparison across groups. For children who sign (i.e., unimodal sign and bimodal), fingerspelling and reading appear to be integrated into a single construct. The model suggests that the same ability is responsible for reading and fingerspelling among signing children; this ability may represent the knowledge of how to represent words in print and with the hand. This is similar to studies where young elementary-school age hearing children also show an integration of seemingly diverse skills (e.g., spoken PA, alphabetic knowledge, word reading) into one construct that represents a higher-order ability (Mehta et al., 2005; Storch & Whitehurst, 2002).

Measurement equivalence

This three-factor model was tested for measurement equivalence across groups. We evaluated the relations (loadings) of the tests to their intended constructs, as well as whether the tests differed in mean levels for a construct across groups (intercepts). No strong evidence of measurement bias was found, suggesting that these tests give essentially equivalent information about children's latent abilities for the three subgroups.

This equivalence has two important implications. First, these tests can yield comparable scores across groups with the adaptations that we made. Given the heterogeneity of DHH children, being able to use one test for all children is critical for educators and researchers. In order for that to happen, a careful process of accommodation and standardization is required to make sure the test can be applied to all DHH children, as occurred in the current study. Establishing equivalence of loadings and intercepts for total scores across the three groups is an important first step. Future research that documents the psychometric properties of test items and indicates whether there is item bias is an important next step.

Second, our results suggest it may be appropriate to use individual tests as indicators of the underlying construct in consideration of cost, time, and burden on students. For example, to measure language, many researchers use vocabulary as a proxy for DHH children's language ability (Kyle et al., 2016; Webb et al., 2015). The advantage of vocabulary is that it can be adapted across signed and spoken languages. In the current

study, we used expressive vocabulary because it allowed the children to answer with a spoken and/or signed word; assessors did not have to determine the children's preferred language, as would be the case for a receptive test. Our results suggest that vocabulary is likely to be a valid assessment of overall language in DHH children and is equally valid to measure spoken and signed language abilities.

Language modality group differences

Finding measurement equivalence allowed us to compare groups on their latent scores (i.e., their estimated true scores on the factors), as well as variances and relations among factors. The groups had equivalent mean language abilities. Other research has found that the variables that influence children's spoken and signed language abilities include those that are the same regardless of modality (e.g., age of identification) and those that are different (e.g., access to spoken or signed language; see Lederberg et al., 2013 for a review). Despite these differences, this study indicates that DHH children who use different language modalities are similar to each other in language ability or proficiency, at least for those who are attending special classrooms for DHH children in the United States. Typically, researchers measure DHH children's spoken or signed language and thus, do not measure children's overall language ability. Because of our novel approach of creating a language factor that allowed the tests to vary for the groups, the language factor reflected the language of the group (i.e., ASL for two groups, English for all three). Thus, we were able to show that modality did not affect the language proficiency of DHH children. The inability to hear spoken language did not impact the ability to acquire language when given access to visual language.

Not surprisingly, the three groups differed in their ability to perceive and manipulate phonemes in spoken words (spoken PA). The unimodal sign group performed much lower than the spoken-only and bimodal groups. In fact, 75% of the unimodal sign group scored below the lower quartile of the other two groups. Intriguingly, 5% of children in the unimodal sign group performed above the mean of the spoken group. These exceptional children seemed able to develop sensitivity to spoken phonemes, even when they have little or no auditory access to spoken language. They likely used visual skills (speech-reading) to build representations of spoken words. For example, they might complete the sound-matching task by matching words that look the same on the mouth (Kyle et al., 2016). They also could be using orthographic or fingerspelling knowledge. Although these few children may use spoken phonology in their reading, the majority of DHH children in the unimodal sign group did not develop spoken PA.

In contrast, while bimodal children scored a half standard deviation lower on spoken PA than spoken-only children, there was considerable overlap in these two groups' abilities. Despite the fact that the bimodal children differed considerably in their spoken language abilities compared to the spoken-only group, they were able to use their auditory access to speech to develop spoken PA almost to the same extent as the children with much better speech skills. This is consistent with Lederberg, et al.'s (Lederberg et al., 2013) hypothesis that print serves as a visual support for DHH children's ability to perceive the sublexical phonological structure of words but only for those who have some auditory access to spoken phonemes.

The spoken-only and bimodal groups did not differ significantly in their reading abilities, notwithstanding their differences in speech abilities and spoken PA. On the other hand, the

unimodal sign group had significantly weaker reading skills than the spoken-only children did. These results suggest that the use of sign language does not impede learning to read, but the lack of auditory access to spoken sublexical structure likely makes learning to read more difficult.

With respect to correlations among the constructs, the unimodal sign group had substantially different correlations than the speech-only group. The correlations between Language and Spoken PA, as well as between Literacy and Spoken PA were lower than those in the spoken-only group. This suggests that while Literacy and Spoken PA were related in all groups, Spoken PA plays a much less important role in reading for young children who do not have access to spoken language. Interestingly, the correlation between Language and Literacy was higher in the unimodal sign group than it was in the spoken-only group. Our findings suggest that when researchers do not separate bimodal from unimodal sign children they may get conflicting results because these groups may learn to read through different pathways.

Educational Implications

Our results suggest that the overall learning objectives of reading interventions should be the same for all DHH children. All children need language and the ability to manipulate the sublexical structure of words to learn to read. For hearing children and for children who use spoken language (with or without sign), learning to read an alphabetic language depends on the ability to manipulate the sublexical structure of spoken words. For these children, instruction that includes phonics and support for the development of phonological awareness is important. For children who do not have auditory access to spoken language, manipulation of spoken words plays a less important role. Indeed, fewer than 5% of the unimodal sign children appear to be developing spoken PA, yet they were developing literacy skills at almost the same level as the other two groups. The strong relation between fingerspelling phonological processing and reading suggests that these children may use fingerspelling as an alternative pathway to manipulate the sublexical structure of printed words, and, therefore, to learn to read. Using fingerspelling to teach these children will probably facilitate their reading abilities.

The challenge in signing programs is that classrooms typically include both bimodal and unimodal sign children. Given that spoken PA appears to be differentially helpful for these two groups of children, optimal instruction will probably require appropriate differentiation of instruction. Future researchers may benefit from examining the potentially differential effects of spoken and fingerspelled phonics instruction on bimodal and unimodal signing children.

While instruction in PA is important, it should not replace intensive language instruction. Our results show that reading was related to children's language abilities for all groups. Thus, instruction that focuses on improving language in the modality that children can access should be an important part of all DHH children's educational environment. In addition to modality, the quality and type of instruction is likely to impact DHH children's language growth. For example, research suggests DHH children's language learning relates to the amount teachers explicitly teach the meaning of new words and expand on children's utterances (Duncan & Lederberg, 2018). As with hearing children, meaning-based instruction is as important for code-based instruction. A balance between the two is probably critical for successful reading.

Limitations

One major challenge of conducting research with low incidence populations is to obtain a sample size sufficient to examine differences within DHH children. We chose to examine differences among groups that differed in language modality but ignored other important variables. We included children from 5 to 8 years of age, but we did not include age in our models. While age may impact the structure of language and literacy skills, our groups did not differ by age. We also did not examine other potentially important variables such as audiological technology (e.g., CI), maternal education, and hearing status of parents. Additionally, the current model uses only a small, selected number of tests per factor.

The children in this study were part of classrooms, but our models did not account for classroom differences because of the complexity of the across-group tests we wanted to evaluate. Bimodal children shared classrooms with unimodal sign children, but spoken-only children were in different classes. Some group differences could be attributable to classroom differences.

While our models showed excellent fit for the spoken and unimodal sign groups, model fit for the bimodal group was substantially lower. This lack of fit may reflect the mixed nature of the bimodal group, which included children who were acquiring spoken language to varying degrees. Children with only mild speech impairment might resemble the factor structure of the spoken-only group, while children with more severe speech impairment may resemble the unimodal sign model. A larger study could evaluate the complexities of group assignment for language modality with a factor mixture model.

Conclusion

A long-running debate in the field is whether DHH children learn to read through qualitatively different processes than hearing children. In our paper, we ask a slightly different question: Do DHH children who differ on their language modality learn to read through qualitatively different processes? The answer is yes and no. On the one hand, for all three groups, reading abilities were related to children's language and their ability to manipulate the sublexical structure of words. On the other hand, the role of spoken language differed for those without auditory access to language. For the unimodal sign children, reading relied less on spoken PA and more on fingerspelling and visual language compared to the other two groups. This suggests that there are qualitative differences in the way unimodal sign children learn to read and indicates that these children may need different instructional practices from that used with hearing children.

Supplementary Data

Supplementary data is available at *Journal of Deaf Studies and Deaf Education* online.

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Conflict of interest

The authors have no conflicts of interest to disclose.

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Table S1. Descriptive statistics of measures

Group	Variable	N	Mean	SD	Min	Max	Skew	Kurt.	α
Spoken	Letter-Word Id.	100	21.06	10.57	1	49	.54	-.48	.96
	Passage Comp.	99	9.71	5.19	4	24	.78	-.47	.90
	Fluency	97	1.05	1.21	0	3	.65	-1.20	(a)
	F. Blending	0	—	—	—	—	—	—	—
	F. Elision	0	—	—	—	—	—	—	—
	F. Imitation	0	—	—	—	—	—	—	—
	Blending	71	6.79	3.94	0	17	.11	-.40	.87
	Elision	54	3.83	2.93	0	9	.13	-1.37	.82
	Sound Matching	97	6.94	5.04	0	20	.82	-.50	.91
	Exp. Vocabulary	96	54.79	17.88	18	102	.10	-.18	.97
	English Exp. Syntax	100	5.72	2.59	0	12	.79	-.47	.91
	English Rec. Syntax	99	16.85	8.70	1	40	.63	.09	.94
	ASL Rec. Syntax	0	—	—	—	—	—	—	—
Bimodal	Letter-Word Id.	102	19.98	9.27	1	54	.93	1.00	.95
	Passage Comp.	101	8.93	4.85	2	31	1.39	2.96	.89
	Fluency	70	1.00	1.17	0	3	.68	-1.11	(a)
	F. Blending	84	1.29	1.56	0	6	.94	-.12	.67
	F. Elision	89	0.78	1.59	0	7	2.45	5.48	.84
	F. Imitation	98	4.01	3.34	0	12	.63	-.82	.88
	Blending	55	3.98	4.13	0	18	1.34	1.56	.91
	Elision	43	2.86	3.99	0	16	1.78	2.92	.92
	Sound Matching	94	6.15	4.88	0	20	1.14	.54	.90
	Exp. Vocabulary	97	54.77	16.92	19	105	.07	-.10	.96
	English Exp. Syntax	0	—	—	—	—	—	—	—
	English Rec. Syntax	102	18.00	8.82	0	42	.18	-.29	.94
	ASL Rec. Syntax	102	19.32	5.36	9	31	-.09	-.71	.79
Sign	Letter-Word Id.	131	17.85	8.10	1	43	.66	.50	.94
	Passage Comp.	129	8.26	3.86	2	21	.92	.39	.85
	Fluency	66	1.32	1.10	0	3	.19	-1.28	(a)
	F. Blending	110	1.48	1.83	0	8	1.32	1.58	.76
	F. Elision	110	1.01	1.72	0	7	1.85	2.53	.83
	F. Imitation	122	4.75	3.42	0	13	.43	-1.06	.88
	Blending	0	—	—	—	—	—	—	—
	Elision	0	—	—	—	—	—	—	—
	Sound Matching	102	3.80	3.70	0	17	2.15	4.30	.87
	Exp. Vocabulary	108	54.79	22.13	11	109	.12	-.68	.97
	English Exp. Syntax	0	—	—	—	—	—	—	—
	English Rec. Syntax	128	14.30	8.56	1	37	.65	-.24	.94
	ASL Rec. Syntax	128	20.21	6.27	6	30	-.41	-1.04	.85

Note. Dashes indicate that the measure was not administered in that group. (a) indicates that Cronbach's alpha reliability is not appropriate for items of a speeded measure. F. = Fingerspelling. Exp. = Expressive. Rec. = Receptive. ASL = American Sign Language

Table S2. Correlations among measures for each group

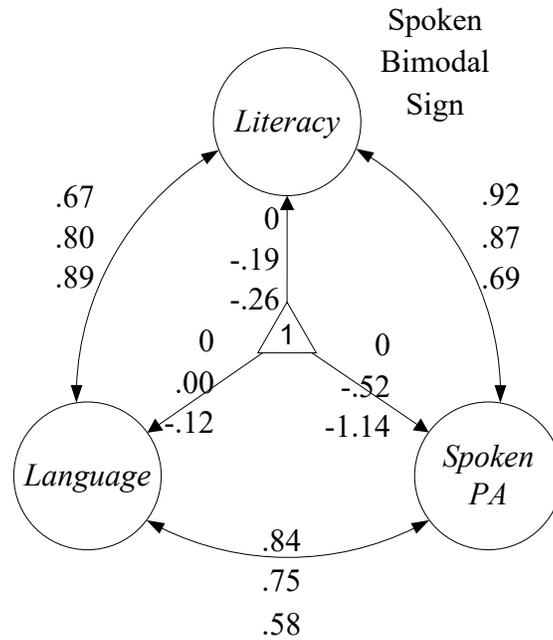
Group	Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
Spoken														
	1. Letter-Word Id.	1.00												
	2. Passage Comp.	0.91	1.00											
	3. Fluency	0.89	0.87	1.00										
	4. F. Blending	—	—	—	—									
	5. F. Elision	—	—	—	—	—								
	6. F. Imitation	—	—	—	—	—	—							
	7. Blending	0.64	0.57	0.45	—	—	—	1.00						
	8. Elision	0.72	0.65	0.57	—	—	—	0.56	1.00					
	9. Sound Match	0.69	0.70	0.67	—	—	—	0.54	0.56	1.00				
	10. Vocabulary	0.70	0.66	0.58	—	—	—	0.54	0.58	0.55	1.00			
	11. Eng. Exp. Syntax	0.49	0.48	0.41	—	—	—	0.49	0.65	0.38	0.53	1.00		
	12. Eng. Rec. Syntax	0.54	0.59	0.44	—	—	—	0.53	0.61	0.56	0.68	0.59	1.00	
	13. ASL Rec. Syntax	—	—	—	—	—	—	—	—	—	—	—	—	—
Bimodal														
	1. Letter-Word Id.	1.00												
	2. Passage Comp.	0.90	1.00											
	3. Fluency	0.83	0.76	1.00										
	4. F. Blending	0.59	0.53	0.49	1.00									
	5. F. Elision	0.72	0.64	0.63	0.61	1.00								
	6. F. Imitation	0.85	0.79	0.84	0.65	0.67	1.00							
	7. Blending	0.64	0.71	0.68	0.37	0.47	0.58	1.00						
	8. Elision	0.66	0.71	0.58	0.50	0.62	0.62	0.88	1.00					
	9. Sound Match	0.74	0.76	0.65	0.49	0.59	0.66	0.65	0.70	1.00				
	10. Vocabulary	0.69	0.60	0.68	0.34	0.51	0.61	0.62	0.69	0.48	1.00			
	11. Eng. Exp. Syntax	—	—	—	—	—	—	—	—	—	—	—		
	12. Eng. Rec. Syntax	0.57	0.54	0.54	0.37	0.46	0.52	0.71	0.76	0.50	0.69	—	1.00	
	13. ASL Rec. Syntax	0.55	0.53	0.58	0.37	0.43	0.58	0.31	0.24	0.37	0.60	—	0.62	1.00

Table S2 (continued)

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
Sign													
1. Letter-Word Id.	1.00												
2. Passage Comp.	0.86	1.00											
3. Fluency	0.75	0.68	1.00										
4. F. Blending	0.78	0.74	0.74	1.00									
5. F. Elision	0.75	0.73	0.67	0.68	1.00								
6. F. Imitation	0.85	0.79	0.73	0.75	0.70	1.00							
7. Blending	—	—	—	—	—	—	—						
8. Elision	—	—	—	—	—	—	—	—					
9. Sound Match	0.66	0.59	0.48	0.61	0.78	0.55	—	—	1.00				
10. Vocabulary	0.77	0.70	0.70	0.61	0.58	0.80	—	—	0.49	1.00			
11. Eng. Exp. Syntax	—	—	—	—	—	—	—	—	—	—	—		
12. Eng. Rec. Syntax	0.74	0.65	0.60	0.63	0.65	0.74	—	—	0.56	0.77	—	1.00	
13. ASL Rec. Syntax	0.66	0.58	0.62	0.56	0.51	0.67	—	—	0.41	0.76	—	0.69	1.00

Note. Dashes indicate that the measure was not administered in that group. F. = Fingerspelling. Exp. = Expressive. Rec. = Receptive. ASL = American Sign Language.

Figure S1. Three-group factor means and correlations



Note. This is a compact representation of the final, three-group model presented in Table 7 and Figure 3. Factor means are inside the figure on the path from the central triangle. Correlations between factors are on the outside of the arcs connecting the factors. Parameters are presented vertically in the order of spoken, bimodal, and sign only groups.

Table S3: Freely estimated unstandardized parameters from the four-factor model, fit separately to each group.

Factor	Test	Loadings			Intercepts		
		Spoken	Bimodal	Sign	Spoken	Bimodal	Sign
Reading	Letter-Word Id.	10.21	8.95	7.76	21.07	19.90	17.85
	Passage Comp.	4.93	4.40	3.46	9.62	8.87	8.22
	Fluency	1.12	0.98	0.96	1.00	0.74	0.75
Fingerspelling	F. Blending	—	1.02	1.50	—	1.17	1.30
	F. Elision	—	1.17	1.41	—	0.66	0.85
	F. Imitation	—	3.04	3.11	—	3.91	4.54
Spoken PA	Blending	2.78	3.25	—	5.92	2.71	—
	Elision	2.06	2.96	—	3.06	1.51	—
	Sound Match	3.87	3.88	3.65	6.82	5.93	3.32
Language	Exp. Vocabulary	15.06	14.63	20.44	55.02	55.16	55.46
	Exp. Syntax	5.82	—	—	7.22	—	—
	Rec. Syntax	7.15	7.18	7.30	16.80	17.94	14.20
	ASL Syntax	—	3.77	5.16	—	19.29	20.06

Note. Dashes indicate the measure was not administered to that group.

Table S4: Unstandardized parameters from the final model: three-factor, three group model with scalar (intercept) invariance across groups

Factor	Test	Loading	SE	Intercept	SE
Literacy	Letter-Word Id.	10.21	0.75	21.05	1.04
	Passage Comp.	4.83	0.37	9.60	0.50
	Fluency	1.16	0.09	1.01	0.12
	F. Blending	1.60	0.17	1.64	0.19
	F. Elision	1.57	0.15	1.14	0.18
	F. Imitation	3.71	0.31	5.13	0.40
Spoken PA	Blending	2.94	0.35	5.11	0.43
	Elision	2.28	0.27	2.99	0.32
	Sound Match	3.59	0.42	7.40	0.47
Language	Exp. Vocabulary	15.90	1.38	55.79	1.78
	Exp. Syntax	5.80	0.52	7.22	0.64
	Rec. Syntax	6.57	0.62	16.25	0.77
	ASL Syntax	4.12	0.45	20.03	0.54

Note. SE = standard error. These estimates are from Model 3 in Table 5 and Figure 3.

Table S5: Residual variances from the final model: three-factor, three-group model with scalar invariance

Factor	Test	Spoken	SE	Bimodal	SE	Sign	SE
Literacy	Letter-Word Id.	5.73	2.05	7.63	2.04	6.04	1.34
	Passage Comp.	3.00	0.62	4.14	0.73	3.03	0.47
	Fluency	0.24	0.04	0.25	0.05	0.28	0.06
	F. Blending	—	—	1.66	0.28	1.14	0.17
	F. Elision	—	—	1.18	0.19	1.11	0.16
	F. Imitation	—	—	2.64	0.49	2.59	0.41
Spoken PA	Blending	8.17	1.64	6.11	1.87	—	—
	Elision	3.50	0.79	5.09	1.50	—	—
	Sound Match	10.99	1.90	7.93	1.81	0.00	— ^a
Language	Exp. Vocabulary	78.42	17.27	66.08	17.84	88.47	20.82
	Exp. Syntax	7.41	2.13	—	—	—	—
	Rec. Syntax	25.43	4.47	33.26	6.02	21.33	3.90
	ASL Syntax	—	—	14.59	2.51	13.72	2.13

Note. SE = standard error. Dashes indicate that the measure was not administered in that group.

^aParameter fixed to identify the factor in that group.

Table S6: R-square values from the final model: three-factor, three-group model with scalar invariance

Factor	Test	Spoken	Bimodal	Sign
Literacy	Letter-Word Id.	0.95	0.90	0.91
	Passage Comp.	0.89	0.80	0.82
	Fluency	0.85	0.79	0.75
Fingerspelling	F. Blending	—	0.52	0.58
	F. Elision	—	0.59	0.58
	F. Imitation	—	0.78	0.76
Spoken PA	Blending	0.52	0.62	—
	Elision	0.60	0.54	—
	Sound Match	0.54	0.65	1.00 ^a
Language	Exp. Vocabulary	0.76	0.78	0.80
	Exp. Syntax	0.82	—	—
	Rec. Syntax	0.63	0.54	0.74
	ASL Syntax	—	0.52	0.64

Note. Dashes indicate that the measure was not administered in that group. ^aParameter fixed to identify the factor in that group.

Application: GaDOE State Schools Division Atlanta Area School for the Deaf K-12

Stacey Tucci - stucci@doe.k12.ga.us
L4GA 2019 Grant Applications To Review

Summary

ID: 0000000250
Last submitted: Feb 10 2020 04:19 PM (EST)

School Profile

Completed - Feb 10 2020

B5 Project/School Profile

You will complete a school profile for each **B5 Project (1)** and **School (multiple)** included in your district application.

B5 Project/School Information

If you are entering information for your **B5 Plan**, and you do not have a school ID, enter 0001 in the text box.

System Name	GaDOE Division of State Schools
School or Center Name	Atlanta Area School for the Deaf - Statewide K-12
System ID	799
School ID	1893

Non-traditional Grade Configuration

Funding is based on **B5, K-5, 6-8, 9-12** allocations. Please indicate + describe below (PK-8, ex) if the school you are entering has a non-traditional configuration.

This is to ensure that we get the correct total FTE for each grade band (that we include the sixth graders from a K-6 school in the 6-8 count, for example).

serving K through 12th statewide

Level

Please select the level that is most appropriate to describe the B5 project or elem/middle/high school you are entering. If the school has a non-traditional configuration like PK-6, for example, you would select Elementary.

As a reminder, Pre-K classrooms (even if they are in an elementary building) should be included in your B5 profile/plan.

Elementary (K-5, Primary, Elementary)

Number of Certified Teachers in School

41

Number of Paraprofessionals or Teaching Assistants in School

15

Principal or Director

Name	Kenney Moore
Position	Director GaDOE Division of State Schools
Email	kemoore@doe.k12.ga.us
Phone	404-558-3863

L4GA 2019 School Contact

This person is the district contact for the grant project at the school (administrator or coach, ex.).

Name	Stacey Tucci
Position	Language and Literacy Initiative Coordinator
Email	stucci@doe.k12.ga.us
Phone	404-649-7645

L4GA 2019 B5 Project/School Literacy Plan

Completed - Feb 10 2020

Please Upload:

DistrictSchoolB5/Elem/Mid/HighLitPlan - DogwoodCountyJacksonElemLitPlan.pdf, ex.

Section 8: School/Center Literacy Plans (to be completed by each school and/or early care center involved)

15 points

Each community served by an LEA is unique and therefore each school and early care center should have a detailed literacy plan that supports literacy implementation for children, families, educators, and community leaders who are part of the community. This literacy plan should be consistent with LEA-partnership goals, objectives, professional learning and models of tiered supports. It also should support coordination of all resources available so that L4GA funding is used to fill strategic gaps determined in needs assessments. **Each school/center literacy plan should be limited to 2500 words. It is not necessary to write the plan in narrative form if the school/LEA would rather develop or use a template.**

- Leadership Team members (including, but not limited to, teachers, specialized staff, school librarians, community organization representatives, teacher educators, families, and leaders)
- How the B-5 and K-12 literacy team will coordinate comprehensive literacy instruction, community activities, and literacy assessments to launch, monitor, and improve implementation
- How evidence-based practices and activities will be selected

- How to identify students for literacy intervention or other support services
- How to monitor the implementation and effectiveness of services

[GaDOE State Schools L4GA Grant Partner Templates](#)

Filename: GaDOE_State_Schools_L4GA_Grant_Partner_odxMLxk.pdf **Size:** 1.5 MB

Application: GaDOE Division of State Schools/Georgia School for the Deaf (K-12)

Stacey Tucci - stucci@doe.k12.ga.us
L4GA 2019 Grant Applications To Review

Summary

ID: 0000000253
Last submitted: Feb 10 2020 04:31 PM (EST)

School Profile

Completed - Feb 10 2020

B5 Project/School Profile

You will complete a school profile for each B5 Project (1) and School (multiple) included in your district application.

B5 Project/School Information

If you are entering information for your **B5 Plan**, and you do not have a school ID, enter 0001 in the text box.

System Name	GaDOE Division of State Schools
School or Center Name	Georgia School for the Deaf
System ID	799
School ID	1895

Non-traditional Grade Configuration

Funding is based on **B5, K-5, 6-8, 9-12** allocations. Please indicate + describe below (PK-8, ex) if the school you are entering has a non-traditional configuration.

This is to ensure that we get the correct total FTE for each grade band (that we include the sixth graders from a K-6 school in the 6-8 count, for example).

serving K-12 statewide

Level

Please select the level that is most appropriate to describe the B5 project or elem/middle/high school you are entering. If the school has a non-traditional configuration like PK-6, for example, you would select Elementary.

As a reminder, Pre-K classrooms (even if they are in an elementary building) should be included in your B5 profile/plan.

Elementary (K-5, Primary, Elementary)

Number of Certified Teachers in School

19

Number of Paraprofessionals or Teaching Assistants in School

4

Principal or Director

Name	Kenney Moore
Position	Director GaDOE Division of State Schools
Email	kemoore@doe.k12.ga.us
Phone	404-558-3863

L4GA 2019 School Contact

This person is the district contact for the grant project at the school (administrator or coach, ex.).

Name	Stacey Tucci
Position	Language and Literacy Initiative Coordinator
Email	stucci@doe.k12.ga.us
Phone	404-649-7645

L4GA 2019 B5 Project/School Literacy Plan

Completed - Feb 10 2020

Please Upload:

DistrictSchoolB5/Elem/Mid/HighLitPlan - DogwoodCountyJacksonElemLitPlan.pdf, ex.

Section 8: School/Center Literacy Plans (to be completed by each school and/or early care center involved)

15 points

Each community served by an LEA is unique and therefore each school and early care center should have a detailed literacy plan that supports literacy implementation for children, families, educators, and community leaders who are part of the community. This literacy plan should be consistent with LEA-partnership goals, objectives, professional learning and models of tiered supports. It also should support coordination of all resources available so that L4GA funding is used to fill strategic gaps determined in needs assessments. **Each school/center literacy plan should be limited to 2500 words. It is not necessary to write the plan in narrative form if the school/LEA would rather develop or use a template.**

- Leadership Team members (including, but not limited to, teachers, specialized staff, school librarians, community organization representatives, teacher educators, families, and leaders)
- How the B-5 and K-12 literacy team will coordinate comprehensive literacy instruction, community activities, and literacy assessments to launch, monitor, and improve implementation
- How evidence-based practices and activities will be selected

- How to identify students for literacy intervention or other support services
- How to monitor the implementation and effectiveness of services

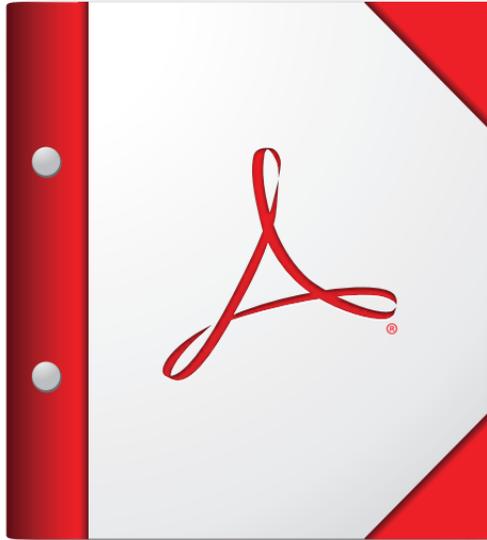
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