# Language Acquisition for Deaf and Hard of Hearing Students 0-8 Years of Age

**December 1, 2020**

# Contents

# 1.0 Executive Summary

This report provides a summary of the actions performed by the Texas Education Agency (TEA), Health and Human Services Commission (HHSC), and Texas School for the Deaf (TSD), as required by House Bill (HB) 548 from the 86th Texas Legislature, Regular Session, 2019.

HB 548 authorizes the TEA to generate and monitor data to enable the use of timely language intervention for deaf or hard of hearing (DHH) and deafblind (DB) students 0-8 years of age.  Local education agencies (LEAs) will administer assessments that will gather data to be populated into the Texas Student Data System (TSDS) Special Education Language Acquisition (SELA) data core collection.  The data generated will be compiled into a statewide report with recommendations for potential interventions.  TEA will upload the annual report to its website and coordinate with HHSC and TSD to share the annual report on their respective websites.

# 2.0 Introduction

To determine if there is evidence of language deprivation in DHH and DB students ages 0-8, HB 548 was implemented to monitor language assessment data.  Stakeholders have raised concern over access for students who are deaf or hard of hearing and deafblind to language and communication naturally, or incidentally, due to their inability to communicate or see.  As a result, parents, families, and educators provide incidental learning as a formal learning tool to support students for developing language.  Root cause analysis shows that incidental learning is lacking for students who have sensory impairments.  Incidental learning is a "constant milieu of visual, auditory, and linguistic stimuli in any given environment" (Hopper 2011, section 2, paragraph 2).

> Incidental learning is a form of indirect learning that uses all available senses to acquire information.

It has been estimated that for people without sensory disabilities, 80 percent of information learned is acquired incidentally.  Because of limited access to incidental learning, students who are deaf or hard of hearing and deafblind have specialized needs.  This requires data monitoring to ensure each student is on track to obtain foundational language and communication skills.  Students can then build on this foundation to continually improve their language acquisition as they navigate their educational career and beyond.

For this report, "student" refers to all children who are 0-8 years of age who are DHH or DB.

## 2.1 Language Deprivation and DHH/DB

"About 2 to 3 out of every 1,000 children born in the United States have a detectable level of hearing loss in one or both ears" (National Institute on Deafness and Other Communication Disorders 2016, 1). The ability to hear provides most students with the means to acquire language through speech as parents and caregivers begin communicating with infants immediately after birth. For a student with hearing loss, the inability to fully access language has potentially negative implications for future success as a contributing member of society.

Lack of early access to language results in the delayed development of cognitive skills, which can lead to depression, behavioral problems, social disorders, and juvenile delinquency.  Language deprivation is defined as a "…chronic lack of access to a natural language during the critical period of language acquisition" (Hall et al. 2017, 2). The critical period of language acquisition is during the first five years of a student's life.  During this period, a student's brain demonstrates plasticity and the ability to acquire language and develop comprehension.  After five years of age, as the plasticity of the brain decreases, the student is still able to acquire language, but at a slower rate.  Long-term effects of language deprivation include an increase need for preventative health care and mental

health services, academic deficits, lack of employment opportunities, and difficulties in making and retaining social relationships.

It is critical to take advantage of the first several months of the student's life and provide language exposure, thus stimulating eye gaze, babbling, and gestures (e.g., pointing, turn-taking), al of which contribute to the foundational language development necessary to assist the student's transition to formal language learning.  As the student ages, recognition of letters, patterns of letters, and written words begins to form and take hold in the student's brain, as his or her vocabulary acquisition increases.  Exposure to foundational language is required for literacy development and likely to lead to an expanded vocabulary as well as the ability to express thoughts and feelings appropriately.  Traxler (2000) demonstrates that a DHH student's reading ability averages at grade 3.9 because of the severe deprivation of early language exposure.

These limitations might be considered more damaging to the deafblind student.  Because their brain cannot process how language is being received, whether it is spoken or signed.  The DB student needs to use tactile sign language, in which he or she places their hands over the signer's hands to feel the movements and physical cues for additional context and content.  However, the lack of early exposure to this kind of language diminishes the student's ability to make neural connections for receptive and expressive language development.

## 2.2 Language Milestones
A typically developing student will reach certain developmental milestones within a range that is considered appropriate for that age.  A student with language deprivation will show significant delays in language development and will demonstrate what is known as "swiss cheese effect" in their development (National Association of State Directors of Special Education 2018).  The holes in swiss cheese represents gaps in development; some are larger than others.  It is important to understand the language milestones a student needs to reach to have the foundations for success.

Students who are learning to speak and students who are learning sign language follow similar patterns and timelines when they are acquiring language.  They begin to babble around the same time, either with their voice and/or with their hands, and they typically say their first word or sign at a similar age (Petitto and Marentette 1991).  Some DHH or DB students may learn to vocalize as well, and they may also use what residual hearing they have with hearing aids.

Understanding language milestones will assist LEAs to have discussions around strengths and weaknesses of each student's language development using the assessment results. As the student participates in yearly assessments of language acquisition, it is the intention that LEAs use language milestones as a guide to compare progress. This approach will lead to a better understanding of any language gaps while identifying strategies to address language deprivation, with the goal of improved student outcomes.

# 3.0 Description of Activities
HB 548 charges TEA, HHSC, and TSD to collaboratively gather and monitor data on the language acquisition of DHH and DB students who are 0-8 years of age.  The three state agencies have assigned duties to fulfill the requirements of HB 548 and allow for the statewide data collection to occur.

## 3.1 Memorandum of Understanding
TEA, in collaboration with HHSC and TSD, developed an MOU pursuant to the authority granted and in compliance with Texas Education Code §29.316(d) for assessing the language acquisition of DHH and DB students who are 0-8 years of age.

The activities in which TEA, HHSC, and TSD are collaborating are:

- Identification and selection of individuals with expertise in the education of the deaf to be on a panel that will identify assessments and tools should be used to measure language acquisition
- Organize the planning and logistics of the panel of experts
- Determination of a process to provide ongoing review of data collected
- Developing guidance for LEAs to disseminate on implementation of the chosen assessments, including obtaining written parental consent
- Gathering assessment results annually of students who participated in the assessments
- Designing a mechanism to analyze and report the data
- Protecting the identifiable information and data in compliance with all state and federal laws
- Drafting and reviewing the report of assessment results annually
- Posting the annual report on each agency's websites

The MOU is currently in the process of being signed by the signatory representatives of each agency. The MOU will have an initial expiration date of August 31, 2021 with options for renewal of successive two-year terms.

## 3.2 Panel of Experts in Deaf Education

To create a robust list of assessments deemed appropriate to assess a student's language acquisition skills, the implementing agencies convened a panel of experts to draw from their collective knowledge. With TEA and HHSC support, Statewide Outreach Center (SOC) at TSD assumed the task of identifying professionals with expertise in deaf education to participate on a panel to determine which language acquisition assessments and tools are appropriate for DHH and DB students who are 0-8 years of age. Using their network of contacts and experts, SOC at TSD created an online survey to gather information about professional experience with assessing DHH and DB students 0-8 years of age, availability for serving on a panel, and communication philosophy. The survey was sent out to several organizations and programs to identify any individuals interested in serving on the panel. Using established criteria, such as qualifications and background, SOC at TSD compiled and analyzed the completed survey results and recommended 10 professionals to participate on the panel.

The panel reflected a variety of expertise in deaf education, including knowledge of American Sign Language (ASL), English, curriculum development, linguistics, early education, and language development assessments in ASL and English. The appointed panelists brought a total of 175 years of combined experience, or an average of 17 years of experience per panelist.

The following action items were assigned to the panel:

- Generate an approved list of assessments and tools for the acquisition of language for DHH and DB students who are 0-8 years of age
- Develop a scoring rubric to compare the results of the different assessments after they are administered
- Develop a guidance table of qualifications for one to assess for HB 548 language acquisition
- Produce a spreadsheet of the approved assessments including:
  o Purchasing information
  o Time to administer
  o Pricing
  o Availability of training
  o Multiple-language options

Members of TEA, HHSC, and TSD met with the panelists over the course of several months in early 2020 with two face-to-face meetings and one virtual meeting due to COVID-19 restrictions.

## 3.3 Approved List of Assessments

The panelists worked together to determine specific assessments which evaluated the language acquisition of DHH and DB students in the age range of 0-8. Many evaluation tools were identified that assess different areas of

expressive and receptive language, such as vocabulary, literacy, global language development, and reading comprehension. Based on initial information, the panel created a list of assessments to choose from to allow for flexibility and individualized matching of testing batteries for each student.  The assessments are categorized into three types of assessments for three age groups: birth to three, three to five, and five to eight.

The first category of assessments is diagnostic, which are norm-referenced tests that compare and rank test-takers in relation to one another.  Diagnostic assessments are mainly used to drive curriculum development and identify gaps in the student's learning.  These identified weaknesses are used to develop lessons to improve the student's learning in that area and drive discussions about student needs.

The second category of assessments is proficiency, which are criterion-referenced tests that measure the student's performance against a fixed set of pre-determined criteria. Proficiency assessments are used to determine if academic progress is being made.

The final category of assessments are achievement tools, which are heavily dependent on developmental milestones that measure growth compared to previous performance.  These tools are accessible to families to monitor and track expected milestones in language development while comparing those to same-age peer counterparts.

Each category of assessments requires a level of expertise in assessing the student.  The panel created a guidance table to explain the different levels of proficiency a test administrator must have to administer a given type of assessment.  During the school year, a student can take multiple assessments for language acquisition for the requirements of HB 548. The highest score for any given category of assessment will be utilized for that student during that school year for monitoring purposes.

In-person administration of multiple assessments is required; however, test administration may be problematic due to the restriction put in place during the COVID-19 pandemic. If an LEA is not able to provide in-person administration of assessments, some considerations are made for virtual administration. For example, one must consider if the timing is appropriate for engaging the student and/or family members in assessment and whether it is conductive to obtaining valid test results. It is important to consider the current physical, mental, and emotional wellness of the family as well as other factors that support a calm, quiet test environment to administer an assessment. When evaluators are not able to administer fully standardized procedures as specified in the test manual for administration, they must carefully consider the impact on the interpretation and validity of the results.

### 3.4 TSDS SELA Data Collection

TEA is currently using an existing data collection system, TSDS, to house all the data gathered for HB 548 into a special core collection, SELA.  The TSDS core collection houses multiple data collections used to standardize the submission process while reducing redundancy between data sets.  SELA is one of the two data collections added to the core collection for the 2020-2021 school year.

During summer 2020, TSDS provided synchronous trainings for all Education Service Centers (ESCs) Public Education Information Management System (PEIMS) Champions on how to use the current core collection for the purpose of HB 548 data collection.  The recordings of the trainings can be found on the TEA Sensory Impairment webpage under State Guidance. The SELA core collection was made available on September 14, 2020 for LEAs to begin uploading demographic information as well as other data as stated in HB 548.  By May 2021, all LEAs were instructed to mark their reporting as "complete," and the data collection will close June 2021 to allow for TEA to compile the data for annual statewide reporting in August 2021.

The required elements of data that will be collected are as follows:

- Demographic information on all students who are DHH or DB and 0-8 years of age as of September 1$^{st}$
- Instructional arrangements

- Specific language acquisition services
    - Direct
    - Indirect
    - Consultative
- Hearing Amplification
    - Average time spent utilizing amplification
- Unique mode of communication preferred by the student for home use
- Assessments used for language Acquisition
    - Results from the chosen assessments

All identifiable information will be redacted to comply with state and federal law, and each student will be assigned a unique identification number to allow for annual tracking and monitoring of progress in language acquisition. The data gathered will drive discussions about ways to improve language acquisition and minimize the language deprivation the DHH or DB student is experiencing.

## 3.5 Resources

TEA created a list of resources about HB 548 for LEAs to access. The Special Education Sensory Impairment [webpage](#) contains a list of HB 548-related resources; additional resources will be added as they become available.

TEA hosted a webinar on HB 548 for LEAs that explained the purpose of the bill, timeline of events, data to be collected, assessments approved for use, and the annual reporting of data. TEA has also published on its website guidance documents such as a spreadsheet containing assessment-related information, a scoring rubric, a flowchart to aid with determining who is required to undergo assessment for HB 548, and a model consent form for LEAs to individualize to obtain consent from parents and guardians to assess for HB 548. TEA has collaborated with Texas Hands and Voices, a parent group, to conduct a recorded webinar for families of DHH and DB students on HB 548.

# 4.0 Data Collection 2020-2021

Annually, LEAs with DHH and DB students who are 0-8 years of age as of September 1 of the current school year will participate in this data collection with consent from parents and guardians. LEAs are responsible for assessing each student, using a minimum of one approved assessment on language acquisition, and reporting the data and results in the SELA core collection. This process will be conducted on an annual basis to track and monitor progress to minimize language deprivation in DHH and DB students.

For the 2020-2021 school year, a baseline will be established and used to compare students' results in future years. Due to COVID-19 restrictions affecting the ability to administer in-person assessments, there will be barriers to establishing a sound baseline to compare student outcomes to as student progress in their educational career; however, LEAs are expected to assess students in good faith.

If there is evidence of any language deprivation, LEAs will reach out to families, and for students age 0-3, the individualized family service plan team, to create an action plan to address any identified issues. Options to address language deprivation include modifying the mode of communication used in the school setting, increasing specific language acquisition services provided, changing the curriculum, providing resources and additional support to families, exposing students to DHH and DB peers and adult role models, and modifying the use of amplification.

## 5.0 Conclusion

With the data derived from HB 548 regarding language acquisition of DHH and DB students 0-8 years of age, LEAs will have the necessary information to execute a plan to improve outcomes if there is evidence of language deprivation. Language deprivation has a marked impact on the physical, mental, and emotional development of a student with a hearing and/or vision loss.  Stakeholders need information to provide support and resources to lead a successful outcome for students. The resources provided can be tailored to the data that is obtained. The key to unlocking a DHH or DB student's future is acquiring language at an early age.

# 6.0 Appendix

## 6.1 List of Approved Assessments for HB 548

The purpose of HB 548 is to generate and monitor data on the language acquisition of students eight years of age or younger who are DHH and DB.
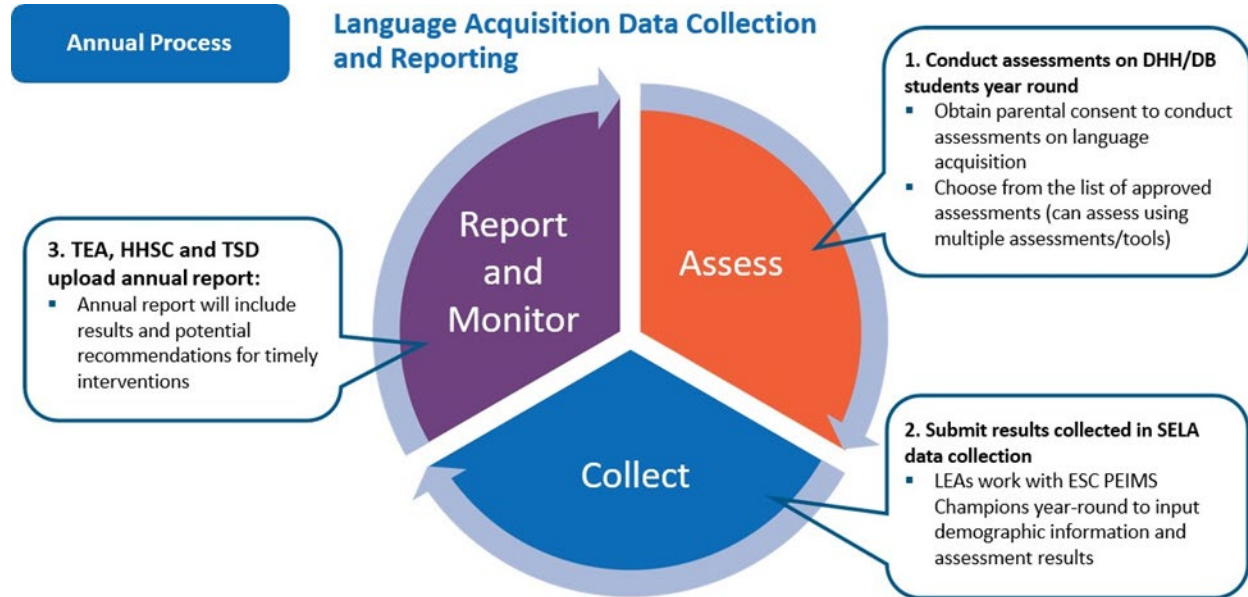
TEA, HHSC, TSD and with the assistance of SOC at TSD, created a sub-committee of experts in language acquisition and deaf education to determine appropriate language acquisition assessments to be used for data collection. The sub-committee decided on the following approved assessments:

- American Sign Language Receptive Skills Test (ASL RST)
- American Sign Language Vocabulary Test (Form 1 and 3 expressive and Form 2 and 4 receptive) (ASL-VT)
- Birth to Three Assessment and Intervention System Second Edition (BTAIS-2)
- Bracken Basic Concept Scale: Expressive (BBSC: E)
- Bracken Basic Concept Scale: Receptive (BBSC: R)
- Central Institute for the Deaf: Teacher Assessment of Grammatical Structures (CID: TAGS)
- Clinical Evaluation of Language Fundamentals – Fifth Edition (CELF 5)
- Clinical Evaluation of Language Fundamentals Preschool – 2 (CELF Preschool-2)
- Communication Matrix
- Comprehensive Assessment of Spoken Language – Second Edition (CASL-2)
- Cottage Acquisition Scales for Listening, Language, and Speech (CASLLS)
- Expressive One Word Picture Vocabulary Test – Fourth Edition (EOWPVT-4)
- MacArthur Bates Communicative Development Inventory
- Oral and Written Language Scales – Second Edition (OWLS II)
- Preschool Language Scales – Fifth Edition (PLS 5)
- Receptive-Expressive Emergent Language Test – Fourth Edition (REEL-4)
- Receptive One Word Picture Vocabulary Test – Fourth Edition (ROWPVT-4)
- Rosetti Infant-Toddler Language Scale
- Visual Communication Sign Language (VCSL) Checklist

## 6.2 Panel of Experts in Deaf Education

- Dr. David Quinto-Pozos, Associate Professor of Linguistics, UT at Austin
- Brianne Webber, Licensed Specialist in School Psychology, TSD
- Jennifer Prigge, Regional Day School Program for the Deaf (RDSPD) Specialist, Brazoria-Fort Bend RDSPD
- Carrie Norman, Communication Specialist/Speech Language Pathologist, Dallas RDSPD
- Susie Tiggs, Texas Sensory Support Network Project Lead of DHH Services, ESC Region 11
- Kathy Robertson, Coordinator Tyler RDSPD and Services for Visually Impaired
- Dr. Oscar Ocuto, Owner, 512 Terps and a Texas-certified Teacher of the Deaf
- Stella Egbert, Director of Instruction, TSD
- Cindy Escobedo, Director of Educational Services, Sunshine Cottage
- Rebecca Mowell, Licensed Specialist in School Psychology, TSD

## 6.3 Annual Cycle

**Annual Process**

**Language Acquisition Data Collection and Reporting**

Report and Monitor | Assess | Collect

1. **Conduct assessments on DHH/DB students year round**
   - Obtain parental consent to conduct assessments on language acquisition
   - Choose from the list of approved assessments (can assess using multiple assessments/tools)

2. **Submit results collected in SELA data collection**
   - LEAs work with ESC PEIMS Champions year-round to input demographic information and assessment results

3. **TEA, HHSC and TSD upload annual report:**
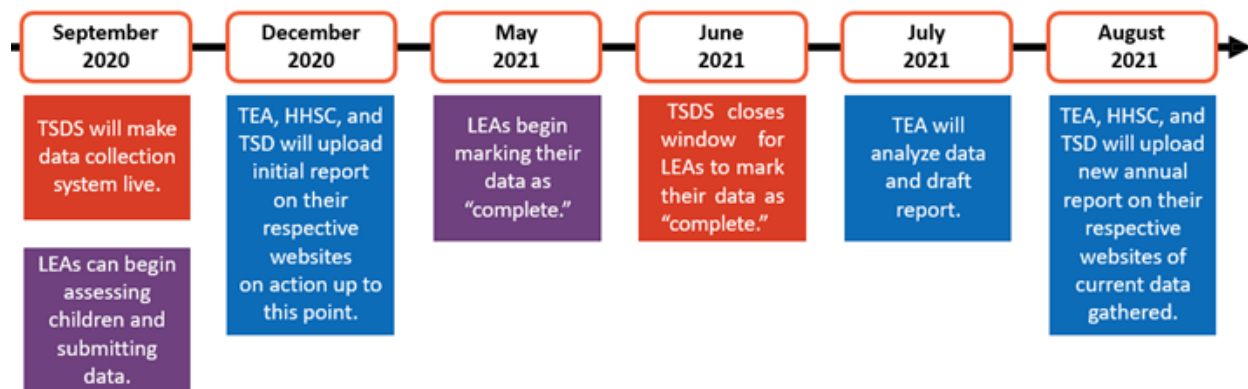   - Annual report will include results and potential recommendations for timely interventions

Language Acquisition Data Collection and Reporting: Assess. 1. Conduct assessments on DHH and DB students year-round. Obtain parental consent to conduct assessments on language acquisition. Choose from the list of approved assessments (can access using multiple assessments/tools.) Collect. 2. Submit results collected in SELA data collection. LEAs work with ESC PEIMS Champions year-round to input demographic information and assessment results. Report and monitor. 3. TEA, HHSC, and TSD upload annual report. Annual report will include results and potential recommendations for timely interventions.

## 6.4 Timeline for 2020-2021

**86th Texas Legislature: House Bill 548**

SELA report for data collection with TSDS

| September 2020 | December 2020 | May 2021 | June 2021 | July 2021 | August 2021 |
|---|---|---|---|---|---|
| TSDS will make data collection system live. | TEA, HHSC, and TSD will upload initial report on their respective websites on action up to this point. | LEAs begin marking their data as "complete." | TSDS closes window for LEAs to mark their data as "complete." | TEA will analyze data and draft report. | TEA, HHSC, and TSD will upload new annual report on their respective websites of current data gathered. |
| LEAs can begin assessing children and submitting data. | | | | | |

86th Texas Legislature: House Bill 548 Timeline of SELA report for data collection with TSDS. September 2020 TSDS will make data collection system live. LEAs can begin assessing children and submitting data. December 2020 TEA, HHSC, and TSD will upload initial report on their respective websites on action up to this point. May 2021 LEAs begin marking their data as "complete." June 2021 TSDS closes window for LEAs to mark their data as "complete." July 2021 TEA will analyze data and draft report. August 2021 TEA, HHSC, and TSD will upload new annual report on their respective websites of current data gathered.