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### Welcoming Deaf or Hard of Hearing English Language Learners: A Guidebook for English Educators

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University of San Francisco

**WELCOMING DEAF OR HARD OF HEARING ENGLISH LANGUAGE LEARNERS:  
A GUIDEBOOK FOR ENGLISH EDUCATORS**

A Field Project Proposal Presented to  
The Faculty of the School of Education  
International and Multicultural Education Department

In Partial Fulfillment  
Of the Requirements for the Degree  
Master of Arts in Teaching English as a Second Language

By  
Sarah Chang  
May 2019

**WELCOMING DEAF OR HARD OF HEARING ENGLISH LANGUAGE LEARNERS:  
A GUIDEBOOK FOR ENGLISH EDUCATORS**

In Partial Fulfillment of the Requirements for the Degree

MASTER OF ARTS

in

TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES

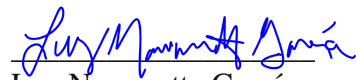
by

Sarah Chang  
December 2019

UNIVERSITY OF SAN FRANCISCO

Under the guidance and approval of the committee, and approval by all the members, this field project (or thesis) has been accepted in partial fulfillment of the requirements for the degree.

Approved:

  
Luz Navarrete García  
Instructor/Chairperson

December 3, 2019  
Date

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## ABSTRACT

Research in the Deaf or Hard of Hearing (DHH) English Language (EL) Education has shown that there is a significant lack of published research and resources within the past ten years.

The purpose of this project is to fill the gap between what is available and what is needed to give EL educators in public universities in the United States a resource and a guide to help them when working with DHH English Language Learners (ELL). Useful information, suggestions, and practices are provided within this guidebook and separated into three different chapters. The goal is to help DHH ELLs feel comfortable by implementing affective practices and adjustments so EL educators can be more affective in helping the DHH ELLs in their classrooms.

## CHAPTER I INTRODUCTION

### **Statement of the Problem**

English Language Learners (ELLs) are a population that is growing fast around the world, and the population continues to increase at present (National Clearinghouse for English Language Acquisition, 2007). The population increases annually, and the estimate is about 40% of the population will be ELLs by the year 2030 (Thomas & Collier, 2002; U.S. Department of Education, 2003). When people consider the differences between an English language learner and a native speaker of English, they are usually thinking of cultural differences, differences in economic class, racial background, etc.

Seldom do people consider English Learners who also struggle with disabilities. In particular, Deaf or Hard of Hearing (DHH) ELLs have not been the focus of research studies. The annual growth of ELL population is mirrored in the DHH ELL demographic as well: 22.5% increase during the year 2000 to 2011 (Cannon & Guardino, 2012). Current statistics show that 3, 223 DHH individuals from infancy to twenty-two years of age in California receive special education services in 2018 to 2019 (Special Education Division, 2019). The annual increase in DHH ELL population suggests this: the progress in DHH ELL educational research should increase in momentum in response in the annual increase in population.

The main problem that is driving this research is that within the last ten years, there were no publications that existed to inform educators of the ‘best practices’ to use with DHH ELLs (Cannon & Guardino, 2012). Existing information is based on professional opinion, and lacks evidence-based research (Christensen, 1993; Gerner de Garcia, 1995). There has been limited research to inform the development of academic resources, and limited resource to inform EL educators on how to help the DHH ELLs in their classroom (Bedoin, 2010; Cannon & Guardino,



2012; Liu, Liu, & Andrews, 2014; Luckner, 2006; Luckner, Sebald, Cooney, Young, & Muir, 2005; Scott, & Hoffmeister, 2018; Quay, 2005; Zhang, 2009).

Among the limited literature available, there exist significant gaps. Most studies and research articles greatly emphasize DHH ELLs in the k-12 system, while the adult DHH ELL demographic is overlooked (Bedoin, 2010; Cannon & Guardino, 2012). In this project, my definition of “adults” refers to DHH ELLs who are 18 years or older, in other words, DHH ELLs at colleges or universities.

The lack of resources and research for supporting the language development of DHH ELLs presents two additional issues. One, there is inadequate training for EL educators of DHH students. Without appropriate training, EL educators are at a loss; they are not prepared to help the DHH ELLs in their classrooms (Bedoin, 2010). EL educators who are untrained have to improvise when teaching DHH ELLs, certain teaching methods will not work with certain DHH ELLs. Second, studies have mentioned the literacy levels of DHH ELLs in the public-school system are lower than what is expected for the grade level (Allen, 2002; Conrad, 1979; Marschark & Harris, 1996; Mayberry, del Giudice & Lieberman 2010; Musselman, 2000). DHH ELLs’ demonstrate low literacy levels compared to English as a Second Language (ESL) students without hearing loss.

The reason for my interests with the DHH community’s relationship with EL education indirectly stemmed from my close friend, Deleenn. Deleenn is currently University of Santa Barbara student who makes YouTube videos performing popular songs in ASL. In my MA course, Methodology of Educational Research, my professor Dr. Jessica Blundell asked the class to think about research topics related to TESOL we would like to do our field project or thesis research on. While brainstorming about my research topic, I was also thinking about my friend

Delenn's interest with deaf culture, and something I had discovered while taking The Structure of American English course.

In the beginning of the course, we learned about what defines a language. At the end of the chapter, it was established that language does not have to be verbally spoken. In class we referred to a textbook titled *An Introduction to Language* (Fromkin, Rodman, & Hyams, 2013). The first chapter of the textbook, In *An Introduction to Language*, there were many mentions of American Sign Language (ASL) as an example of a non-verbal language. The textbook mentions ASL as being most often used by DHH individuals (Fromkin, Rodman, & Hyams, 2013), but DHH ELLs were not mentioned. I wanted to learn more about the current status of DHH EL Education, so I began researching for available academic articles on the topic. It was to my surprise when I was not able to find much publications on the topic. Many of the articles I have found were articles on the education of DHH ELLs in the K12 system, and many of the articles stated the need for more research studies to be conducted. My previous course, The Structure of American English, indirectly motivated the research into my field project. My decisions for creating a field project is partially selfish because I wanted to create a practical project that EL educators can read and implement in class; it is my hope that creating this project will also help me when I found myself in a classroom with DHH ELLs.

Experienced educators understand that each individual student struggles with different challenges and respond to different teaching styles or methods. Not one method will work for every single class, as class dynamics are different and require EL educators to utilize different strategies or teaching methods. If there is a readily available collection of strategies, suggestions, and teaching methods compiled into a handy booklet, it would be an efficient resource for EL educators. This project is the beginning of more research and resources to come in the future, I

am only shedding light on an area of study I believe require more attention. An EL educator's time can be more effectively managed, eliminating the need for a period of trial and error. Based on a survey conducted by Becker (2007), EL educators felt the education of DHH ELLs was one of the topmost important challenges they are facing. There is a need to find resolutions to these problems.

### **Purpose of the Project**

This project aims to be a resource for EL educators in 4-year colleges and universities who have adult DHH ELLs in their classrooms. It will address the lack of resources for EL educators with DHH ELLs in their classrooms, it will also address the academic needs of DHH ELLs. I chose this project because this is a relatively new topic area requiring exploration. I have also noticed a trend; several academic articles recommended more research into the topic, and more resources made more accessible for EL educators. This project aims to provide EL educators with a guidebook on how to help the DHH ELLs in their classrooms. It provides scenarios and suggestions on how to assist in lowering the affective filter of DHH ELLs in university classrooms. Everything presented in this project are suggestions, strategies, and practices that have shown to be effective for DHH ELLs of a younger age group. The materials inside this project are not necessarily utilized in an adult EL classroom, but I believe adapting the strategies will help make it effective in classrooms with adult DHH ELLs as well.

This project is called "Welcoming Deaf or Hard of Hearing English Language Learners: A Guidebook for English Educators". The title can be found on the cover page and the first page after the cover page. The cover page consists of the title of the project on top, three colorful decorative photos below, and my full name below the three colorful photos. It is divided into 3 chapters, and two sections. The first section is an introduction that are the first two pages of this

project, and contains a note to fellow EL educators, as well as a detailed explanation of the contents of this project. The other section located in the back are the references I looked at while creating the project. All the sections and chapters are color-coordinated. The chapters are divided into subsections with titles that specifies the type of information you can hope to find. The first chapter of the project explains in detail about how the Federal laws and educational policies help protect the rights of disabled students in school settings, including those who are DHH. There is also a subsection in this chapter that gives a profile of several public and private universities, listing the services they provide for their students with disabilities. The second chapter of the project presents basic information to note about DHH ELLs experiences, and how that can influence how educators should interact with the students. In this chapter, there is also a subsection that describes in detail about the prevailing misconceptions the general public may have about DHH individuals as well as ASL. The last portion of this chapter details the origin and history of ASL, and about the first deaf university in America. The third and final chapter of the project will give EL educators on how to conduct class in a classroom when there is DHH ELLs present because to work with them, EL educators needs to make sure that their lectures and classroom content are accessible to DHH ELLs in class. In this chapter, there are many helpful suggestions on how to improve on this, and there is also a subsection concerning different teaching practices and approaches that have been supported by research. The final subsection of this chapter concerns some extra information about computer apps and others that might be worth EL educators' time to look into. The final subsection is meant to be extra light material to provide EL educators with resources that might be available. In the Table of Contents, the first chapter is presented visually as the orange chapter, the second chapter is visually presented as

green, and the third and final chapter is visually represented as the blue, the header of the chapter as well as the pages corresponding to the chapters will be in the same colors.

### **Theoretical Framework**

This project is informed by Stephen Krashen's Affective Filter Hypothesis. Giving EL educators the resources to better accommodate the needs of the DHH ELLs in their classroom will help them feel more comfortable in the learning environment. In Krashen's Affective Filter Hypothesis, learners may find themselves in emotionally stressful situations in their classrooms that affects their ability to learn (Berho & Defferding, 2005; Dulay & Burt, 1977; Krashen, 1982, Krashen & Terrell, 1983). Their minds will produce a block that makes it difficult for them to commit information to their long-term memory, so it is heavily advised that educators have a great understanding of Krashen's Affective Filter Hypothesis, and commit themselves to teaching practices that are student centered, and help lower students' affective filter (Grace Hui Chin Lin, 2008). Krashen argues that lowering of their affective filter will help the students feel more comfortable with the teacher. When the students feel comfortable with a teacher, they will be willing to ask for help if they have a learning disability that is hindering their learning. This especially influences ESL learners who become stressed over learning English.

If you consider the amount of stress ESL students without hearing loss or hearing difficulties have over learning English, consider the amount of stress DHH ELLs faces on a daily basis in their EL classrooms. The challenges mentioned earlier in the project are: (1) EL educators need more resources to help the DHH ELLs in their classrooms, and (2) the DHH ELLs' literacy level are behind when compared to their hearing peers (Allen, 2002; Conrad, 1979; Marschark & Harris, 1996; Musselman, 2000). Giving EL educators a guidebook on how

to lower affective filters and make them feel more relaxed may help remedy many of the challenges we are facing.

### **Significance of the Project**

This project is beneficial for EL educators and students because it will help with some of the many concerns EL educators have with their limited understanding in guiding and assisting the DHH ELLs in their classrooms. This project will provide EL educators with many useful information about the DHH community and the DHH ELLs that may not be common knowledge. There is certain information that may help with DHH ELL Educations that EL Educators may not considered, and instead of scattered on different websites, academic articles, and books, it is all gathered and neatly organized for perusal. EL educators do not have to spend as much time exploring, they can focus their time and energy in the subject content they are teaching in their classrooms. This guidebook is meant to be like a helpful assistant providing EL educators with suggestions for improvements in their classroom. Not every suggestion is applicable in every classroom, but the project would help the EL educators feel less disconnected with their DHH ELL students. The EL educators will have more freedom, much of the information they need will be there for them in one place.

This project is also shedding light on an area of education that is lacking in research, and would hopefully bring in other research and resources, as well as more discussions and research in other areas related to DHH ELL education. There are many places within this topic worth exploring, and I was not able to cover every narrow topic that I wanted to cover over the time constraint of one semester. As mentioned above, there have been no publication in this topic for the past ten years. I have chosen to create a field project; I hope other researchers would publish research in this area where published academic research is much needed. DHH ELLs would

benefit as well from the project because they are the recipients of the suggestions given in the project. The EL educators will implement some of the helpful suggestions in the project, and the DHH ELLs academic performance will improve.

## CHAPTER II REVIEW OF THE LITERATURE

### **Introduction**

This literature review is divided into three themes that are related to the topic of the project. The first theme presents all the current research made on the topic of adult Deaf or Hard of Hearing (DHH) English Language Learner (ELL) education, which is an important part of the development of this project. The research from this section informs me of the areas that requires more exploration. Understanding what is currently being challenged, explored, and what is suggested for further exploration. The second theme delves into the concerns of DHH ELLs in regard to their own education, the concerns of their family, and the concerns of the English Language (EL) educators that are responsible for educating this population. The next section will delve into some of the important policies concerning DHH ELL education, covering their rights in the classroom, the requirements, and other suggestions or information of interest that an EL educator should know about. These three topics helps me understand the scope of the project. The development of the project is based on information that falls within these three sections. This chapter concludes with a summary of all the findings from current research to the concerns of the populations, professionals, and people involved, and policies and laws related to the topic of this project.

### **Current Educational Research in DHH EL Education**

There is a distinction among DHH ELLs when it comes to English literacy performances on standardized tests as well as in classroom performances (Charrow & Fletcher, 1974; Trybus & Jensema, 1978). DHH ELLs with prior experience with sign language have better performances on English literacy tests than DHH ELLs with no prior experience with American Sign Language (ASL) (Charrow & Fletcher, 1974; Trybus & Jensema, 1978). However, better



performance by DHH ELLs who have acquired ASL as their first language was not only present in their test scores, their ability to acquire a second language is generally higher than DHH ELLs who have not acquired ASL as their first language (Sparks, Patton, Ganschow, & Humbach, 2012). This distinction has been attributed to their home experiences prior to entering the public-school system. DHH ELLs who are fluent in sign language prior to learning English are often born to parents who are also DHH. In a study done by Charrow and Fletcher (1974), they've also hypothesized that DHH ELLs with DHH parents have similar performance on language tests as foreign students. Their conclusions from the study is that the results seem to indicate that DHH ELLs with deaf parents are very similar to foreign students in the English as a Second Language (ESL) program, but further investigation is suggested because some ambiguous data made the results unreliable and inconclusive. This implication suggests that DHH students born to parents who are not DHH have a greater disadvantage in English acquisition than DHH students with parents who identify as DHH (Meadow, 1968).

In their article, Goldberg and Bordman (1974) argued for the use of ESL teaching methods for DHH ELLs because DHH ELLs have similar struggles to ESL students. DHH ELLs with no prior experience with sign language may benefit from ESL teaching methods, they argue for the implementation of an adapted ESL teaching method in public university classroom and explains practical methods for implementation that will make the ESL teaching methods accessible for DHH ELLs. EL educators often focus their attention on clear communication with the DHH ELLs in their classrooms that as a result the subject content becomes second in priority (Goldberg & Bordman, 1974).

Charlotte Evans (2018) argues for the bilingual model of education with American Sign Language (ASL) and English in language schools, but this only pertains to DHH ELLs acquired

ASL as their first language. She explains that a bilingual program with DHH ELLs with ASL as their first language is considerably different from other bilingual programs with ELLs who are not DHH. The first difference is in the languages being used in the classroom, ASL is non-spoken language, while English is a spoken language. A further difference is the lack of a writing system in the first language ASL. Evans also talks about the some DHH ELLs' inconsistent exposure to ASL. However, research shows that ASL functions very similarly to the way a spoken language would function. (Baker & Battison, 1980; Klima & Bellugi, 1979). There have been many supporters for this model of education. However, the Bilingual model does not consider the DHH ELLs who have not acquired ASL as their first language.

In the absence of evidence-based practices that are effective with DHH ELLs, more practices that are known to be effective for a different demographic of ELLs should be implemented and studied (Luckner, 2017; Luckner & Cooke, 2010; Paul et al., 2013; Williams, 2012).

### **Concerns about DHH ELL Education**

Individuals who identify as DHH may have varying degrees of hearing loss, from being able to hear certain frequencies to absolute hearing loss. Their mode of communications can vary as much. This is often where most people have misconceptions. The most common misconception comes from the notion that DHH individuals is either fluent in sign language or spoken language. However, some individuals who identify as DHH communicates with sign language, while simultaneously speaking English or another spoken language. The nature of communication with the deaf community is complex and can complicate daily matters that people might take for granted. Education relies heavily on educators being able to communicate

with the students in the classroom, especially when addressing ELLs who also identifies as DHH.

According to Shirin D. Antia and Kathryn H. Kreimeyer (2001) when it comes to interpreters that are assigned to DHH students, the classroom teachers prefer full-time interpreters that would do more than translation between teacher and student. Full-time interpreters also help with clarifying instructions, mediate communication when there's a group activity, and also helps with tutoring DHH learners. However, administrators and special educators have preference for a translator. They fear a DHH student and the classroom teacher would become dependent on a full-time interpreter. Dependence on an interpreter would lead to the DHH student slower improvement rate in their academic. 69% of DHH students are educated in the public-school system, and 62% of DHH students are integrated into a regular public classroom settings n (Holden-Pitt & Diaz, 1998), many concerns still arises when exploring the topic of inclusion of DHH learners (Stinson & Lang, 1994). Few interpreters are actually trained to be in an educational setting even though more than 50% of those who graduated from Interpreter training schools found jobs in educational setting (Stuckless, Avery, & Hurwitz, 1989). When interpreters find work in academic settings, the expectations of their responsibilities and roles may change drastically based on two things: 1) Part-time interpreters takes on different responsibilities than full-time interpreter, and 2) Classroom teachers, special education instructors, and school administrators all have different expectations of interpreters. (Antia, S. D. & Kreimeyer, K. H., 2001).

### **Policies and Suggestions Regarding Educational Accessibility**

Under the Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA) certain special services and accommodations are provided to students with disabilities. Students who identifies as DHH are also protected by these federal laws. Their rights to equal access in classroom content is outlined by the National Association of the Deaf (NAD) Government Affairs and Law Center (2002). Under these Federal laws and Policies, school districts are required to provide the disability and language assistance. The Office of Special Education and Rehabilitative Programs (OSEP) is established to improve the academics for individuals with disabilities from birth to 21-year-old adults. They ensure individuals with disabilities will have access to fair, equitable, and high-quality education.

Under IDEA, the parents or any student over the age of 18 have the right to request special education services for public education. According to the California Department of Education (2018) parents or guardians of students with disabilities have certain rights. If a request for special education services has begun or has been refused, the parents or guardians have the right to receive prior notice. Parents or guardians of students with disabilities must provide written consent before assessments for special education services are administered, any changes to a student's special education must also have parental consent before moving forward. Parents or guardians of students with disabilities may also access and keep track of the students' educational records. If a parent or guardian disagrees with the placement of their child in a special education program, the child will remain in his or her current program while the disagreement is settled. Parents or guardians may also file a complaint against the school district if they have violated a law, all complaints and allegations should be investigated. If a student

with disabilities is is on the verge of expulsion or suspension, the parents or guardian have the right to be notified.

In each state similar laws and policies are in place to protect the rights of students with disabilities. However, depending on the disability and how it affects the student, certain assistance that would be offered in one state may not be offered in another. Section 504 of the Rehabilitation Act of 1973 and ADA must ensure that all students who are DHH receive accommodations (National Association of State Directors of Special Education, Inc., 2018). According to the National Association of State Directors of Special Education, Inc. (2018) IDEA specifies the modifications and classroom accommodations that can be provided to students who are DHH. The school district must also be able to evaluate students with appropriate instruments and materials to determine if a student has a disability.

Educators of DHH ELLs must work very closely with parents and the DHH communities and experts to help provide for DHH ELLs (California Department of Education, 2000). They argued the importance of parental involvement in the academic success of DHH ELLs. Research studies have shown that great progress is achieved by the DHH ELL if a first language is introduced prior to entering the public educational system (Sparks, Patton, Ganschow, & Humbach, 2012). If the parents have daily interactions with the DHH ELLs, the progress of the DHH ELLs language development will be enhanced.

Student Disability Services (SDS) from the University of San Francisco (USF) have nine points to make in regards to DHH student education, these are the suggestions applicable to ELL specifically: 1) If a student is seeking accommodations without a letter from the SDS, the student should be referred to the offices by the teacher. 2) Due to the nature of a student's disability, some assignments or class activity may be substituted with another assignment of equal weight

or value. 3) If a student has difficulty taking notes during class sessions, the SDS will assign a notetaker to the student. 4) Educators should avoid sudden movements, staying centralized in the classroom to make lip-reading easier for students. 5) Educators should remember to write important announcements on the board clearly making expectations for future class meetings easily accessible. 6) Educators should face the student when speaking to them. 7) Whilst discussing in class, make sure every student understands to speak one at a time, so students with disabilities may also participate in the discussion. 8) Educators should keep in mind that DHH students are unable to take in oral instructions while reading or writing. 9) Educators should confirm that a film, video, or documentary have written transcripts or closed captions before showing it in class.

San Francisco State University (SFSU) offers sign language interpretation, real-time captioning, assistive listening devices, and note-taking assistance to students who are DHH. The interpreter will provide the DHH students with ASL or another form of sign language that they prefer. Equipment and programs are used to transcribe videos into written English verbatim, in this way, DHH students are still able to participate in class discussions, follow lectures and videos shown in class. Voice amplification devices worn by the students will also receive signals from microphones or public address systems with the help of assistive listening devices. Several note taking services are also provided to eligible students. Note Taking Express offers typed notes provided by professional note takers to the user within one or two days of a lecture being uploaded online. Some students are allowed to use a laptop in class upon being approved by the classroom instructor because some students have disabilities that make obtaining information difficult without actively seeing and recording the information down. Audio recorders and classroom note-takers are also offered to DHH students, Provided to disabled students of SFSU

who are not DHH are exam accommodations, housing accommodations, more flexibility with attendance and deadlines, on-campus shuttles for students who find inconvenience in traveling long distances, and reserved seating for students who have trouble obtaining class instructions. I have included information about these services because they may also apply to DHH students. Class examinations related accommodations offered to disabled students includes extension of timed exams, adapted exam questions for specific disabilities. These accommodations are offered upon the request of the student with the disability.

University of California, Los Angeles (UCLA) is home to the largest and most active deaf community in the nation. The school offers an abundance of helpful resources that will make UCLA students who identifies as DHH have a more comfortable experience there. UCLA ensures the safety and equal learning opportunities to their DHH student body. UCLA's Center for Accessible Education (CAE) is where students with disabilities can get accommodations for their disabilities. The following services are made available to any DHH students of UCLA: Interpreters, real-time captioning of instructor lectures, notetakers, tutors, assistive listening devices, house accommodations, priority enrollment, computerized training programs, student orientation, special workshops and support groups that discuss topics and concerns of interest to students. To ensure that UCLA is in compliance with all Federal laws and policies that protect the rights of students with disabilities, an office is established to monitor the implementation of resources and accommodations provided by the Center for Accessible Education.

University of California (UC), Berkeley offers ASL interpreters and Communication Access Realtime Translation (CART) captioning services to its DHH student body with the Disabled Students' Program (DSP). CART produces word to text translation of lectures, discussions, and seminars. Transcripts are provided within 24 hours of assignments being

assigned. If enough notice is provided, captions are also provided for videos. CART is only provided when the student requested the service is present in class. There are currently no interpreters in the school staff, but the DSP provides interpreters through third-party contractors. After the request has been approved by a specialist, interpreters are assigned to a student based on their schedule. DSP also offers Note taking services and test taking services for disabled students of UC Berkeley, this may be applicable to DHH students, but was not listed as services provided to DHH students of UC Berkeley. Students with disabilities are allowed to use assistive technology for notetaking in class upon approval by the students' disability specialists. According to The Purpose and Provisions of Class notes, class notes that are created are not intended to be a substitute for class attendance. Requests for note-taking services are promptly handled, and students are provided with a note taker. If there is a delay in providing a note-taker to a student, the student will be offered an interim note-taking technology for classes where note-takers have not been provided.

### **Summary**

In this literature review, I explored three main topics that are loosely linked, and very important areas to understand for the completion of this project. The first section focuses on the current research of DHH ELL education. Some of the current research available on adult DHH ELL education in public universities and colleges is presented. There are three noteworthy topics that are the main topic of discussion in the literature: Bilingual Education with ASL and English, difference in academic performance between DHH ELLs with parents who are DHH and DHH ELLs with parents who are not DHH, and the use of ESL teaching methods with DHH ELLs.

The second section emphasizes the educational concerns DHH ELLs, family members, school counselors, and advisors. I also address a common misconception most people have about



DHH individuals. This misconception influences the education of the education of DHH individuals, particularly DHH ELLs. Since communication is an integral part of language classes. Areas EL educator feels can be explored more in depth. Family members of DHH ELLs may have concerns about the educational support that is being provided as well. This section is very important to explore and understand because it answers the question of what can be explored in the future.

The third section covers the laws, policies, and educational rights of DHH ELLs, which will provide much of the information that will be essential for EL educators working with a DHH ELLs. There are essentially three federal laws that protects the educational rights of disabled students: Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA). Essential information for EL educators to consider and understand when working with DHH ELLs are also laid out in this section as well. Different universities provide different types of accommodations to the disabled student body, and I've listed the set of services, resources, and accommodations that will be available to the DHH students of USF, SFSU, UCLA, and UC Berkeley.

In conclusion, the literature review covers the current research interests in the Higher Education of DHH ELLs in Public Universities and four-year colleges, educational concerns and challenges of families of DHH ELLs, EL educators, and other DHH experts in the community, and the policies and laws safeguarding the educational rights of DHH ELLs.

## CHAPTER III THE PROJECT AND ITS DEVELOPMENT

### **Brief Description of the Project**

This project is a guidebook to assist English Language (EL) educators working with Deaf or Hard of Hearing (DHH) English Language Learners (ELLs) in their classrooms. It is a resource that many educators will need. In this project, I have included information I, as an EL educator, would want to know about my students and their background. This project is divided into 3 chapters, and two sections. The first section is the introduction that are the first few pages of this project aside from the front cover and table of contents, the other section includes the references in the back. The references are in alphabetical order in 16-point Century Schoolbook font, with 1.5 spacing in between. The chapters are further divided into subsections with titles that specifies the type of information you can hope to find there. Each subsection in a given chapter is related to the theme of that chapter.

This project is titled “Welcoming Deaf or Hard of Hearing English Language Learners: A Guidebook for English Educators”. Included beneath the title is three colorful decorative images that represents the research topic of this field project. Figure 1 is a screenshot of the cover page of this project.

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## A Welcoming Classroom for Deaf or Hard of Hearing English Language Learners

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Sarah Chang

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Figure 1. Screenshot of the cover page

The Table of Contents is immediately after the inside cover and consists of all the chapters and sections of this project. Each color represents a different section or chapter of a book as you can see in Figure 2 below. My advisor added a link that will take you to each chapter by clicking on the page number after I have mentioned that I was concerned that the Table of Contents was not clear enough. I had wanted to add more page numbers to each specific subsection in each chapter, but my advisor had added the clickable page numbers to each chapter and told me that adding that would be sufficient.

# Table of Contents

Introduction:		
◆	◆ <a href="#">Dear Educator</a>	1-2
	◆ <a href="#">The Features of this Guidebook</a>	
What is Required by Law?		
◆	◆ <a href="#">Educational Policies</a>	3-12
	◆ <a href="#">Private and Public Universities</a>	
Student Experiences		
◆	◆ <a href="#">Language Backgrounds</a>	13-21
	◆ <a href="#">ASL: Misconceptions and Brief History</a>	
What's Effective Inside an EL Classroom?		
◆	◆ <a href="#">Teaching Approaches and Practices</a>	22-41
	◆ <a href="#">Tips for EL Educators</a>	
	◆ <a href="#">Useful Resources</a>	
◆	<a href="#">References</a>	41-50

Figure 2. The Table of Contents in this project shows that every chapter of the project is color coded.

After the Table of Content comes The Introduction Section, which is also the red section in the project. This section includes two subsections: “Dear Fellow Educators” and “The Features of this Guidebook”. This section provides EL educators with explanations about what is offered within the pages of this project, and why I believe this project is a necessary resource for EL educators. Each subsection takes up a full page of the Introduction Section, so the

Introduction Section is a total of two pages. Each of the introductory pages includes a decorative visual on top to bring in some vibrancy.

The first chapter after the introduction section is called “What is Required by Law”, and it is also the orange chapter in the project with the background and page numbers highlighted in orange. This chapter is divided up into two different subsections: Educational Policies, Private and Public Universities. The subsection called “Educational Policies” explains the Federal laws that governs what an EL educator, and in extension the university, is required to provide for their DHH students in detail. This subsection is an essential section, and I have dedicated several pages detailing in great length what is expected, and what would happen if requirements are not met. The legal actions that can be taken against the school or educator if a disabled student’s rights are violated, or the accommodation already provided is inadequate. There is also a subsection dedicated to some information about different services different universities provide to the disabled student body. This subsection is for EL educators to look at as examples for other assistance that can be provided to disabled student. The total number of pages for this chapter is ten pages with five pages dedicated to “Educational Policies”.

The second chapter of this project is called “Student Experiences”, and it is the green chapter in the project. The backgrounds of each page and the page numbers are all highlighted in green. This chapter is further divided into two subsections called “Language background” and “ASL Misconceptions and Brief History” respectively. “Language Background” briefly describes the different language backgrounds DHH ELLs may have because similar to English as a Second Language (ESL) students, DHH ELLs have many different types of language experience. The way they learn and the way they should be taught may be affected by their experience with language in the past. One of the most common misconceptions is that all DHH

ELLs understand sign language, and this is not always the case. This subsection explains the diversity within the DHH ELL community. This chapter gives a brief description of the different language backgrounds and type of experiences DHH ELLs may have experienced prior to entering a public university. There is also a subsection dedicated to demystify some of the misconceptions about the DHH community as well as American Sign Language (ASL) and other types of sign language, and also providing some details about the history and origin of ASL and the development of the first university for the Deaf in the United States. This chapter takes up a total of nine pages.

The third chapter of this project is called “What is Effective Inside an EL Classroom”, and it is also the blue chapter in the project. This chapter is divided into three subsections called “Teaching Approaches and Practices”, “Tips for EL Educators”, and “Useful Resources”. This chapter is also the longest chapter in the project because it contains a lot of useful information, recommended practices, and suggestions. The first subsection “Teaching Approaches and Practices” is where you can find the main practical information about what other EL educators have found useful when working with DHH ELLs. Some of the strategies are targeted towards younger learners, but I have included it because it might be effective for older DHH ELLs as well. This subsection takes up eight of the 20 pages, this subsection is part of what inspired the entire project. I dedicated many pages to include detailed information that I believe to be useful to an educator that has not have that much training or experience working with DHH ELLs.

The final section in this project is for the references, and it is also the purple section in the project. It includes references for all the academic articles, books, and websites I’ve looked at while developing this project.

## **Development of the Project**

I did not come up with the idea to develop this project immediately, I had to brainstorm for a few days before I had come up with an idea. I have many areas of interest, and I was not entirely certain about what to focus my attention on in the beginning. While I was brainstorming, I was thinking about going back to my apartment to watch some of my friend's YouTube videos where she translates and perform popular songs with ASL. This was something innocuous I was thinking about as something to do to relieve some stress. This thought along with something I have noticed when I first started my program, gave me the idea for this project.

Upon beginning my studies in English language education in MA TESOL Program here at the University of San Francisco (USF), I have noted the many mentions of EL learners from different countries. In all of my textbooks, learners from all different parts of the world were mentioned. I have also observed the many times in which ASL was mentioned as an example for a non-verbal language. Curiously, ASL are mostly used by DHH individuals, but they were never brought up. This made me curious about the state of EL education for the DHH ELLs because I didn't hear anything about them in my classes. I began researching about all the related areas, and it was to my surprise to find that there was a serious lack of research done on the topic of DHH ELL education. Many of the articles I have found were articles on the education of DHH ELLs in the K12 system, and many of the articles stated the need for more research studies to be conducted. This is when I have decided on my topic for my field project. I wanted to do a field project because I wanted to create something practical that an EL educator would be able to glean practical recommendations to utilize in the classroom.

This project is based on Krashen's Affective Filter Hypothesis, a theory which emphasizes the importance of lowering the affective filter of a language learner. Krashen states

in his theory, that language learners are affected by four different factors. These four different factors, anxiety, self-confidence, motivation, and attitude can hinder their acquisition of a second language. To help language learners acquire their second language, EL educators should conduct their teaching in a way that centers on the students' needs. It is only when ELLs are relaxed can they obtain the classroom content and commit it to their long-term memory. This theoretical framework works well for this project because this project was designed to guide EL educators in making a classroom and the coursework accessible for DHH ELLs. While reviewing the literature, DHH students have often commented on the difficulties of understanding lectures or taking notes when the content is not made accessible to them. When Krashen proposed this theory, he was referencing the language learners from different parts of the world. However, DHH ELLs have the additional difficulties of navigating the educational settings with their disabilities hindering what they can access in the classroom.

When I first began to create the field project, I attempted to develop the project using Microsoft Word. However, Microsoft Word has proven to be difficult to use, especially for someone unfamiliar with all the capabilities of Microsoft Word. I had attempted to create the project with Microsoft Word for a week to no success. Professional organization and formatting were difficult to achieve. I abandoned the endeavor after a little more than a week with no progress because I felt I was wasting valuable time. I started using Google Slides, which I was much more familiar with.



In Figure 3 , I show you how my Table of Contents page looks on Microsoft Word and PowerPoint. They may look similar in color scheme, layout, and styling. However, as a result of being unfamiliar with all the capabilities of Microsoft Word, I encountered many technical challenges that took me hours to fix.

**Table of Contents**

- ❖ Introduction:
  - ◆ To The English Language (EL) Educator
  - ◆ The Features of this Guidebook
- ❖ Concerns over EL Education
  - ◆ Concerns Deaf or Hard of Hearing (DHH) English Language Learners (ELLs) have
  - ◆ Concerns EL Educators have
  - ◆ Concerns the Parents may have

**Table of Contents**

- ❖ Introduction:
  - ◆ Dear Educator 1-2
  - ◆ The Features of this Guidebook
- ❖ What is Required by Law?
  - ◆ Educational Policies 3-12
  - ◆ Private and Public Universities

Figure 3. The first table of content is made with Microsoft Word, the second table of content is made from Google Slides.

At first glance, the Microsoft Word layout does not look much different from the layout for the Google Slides. However, using Microsoft Word to change the layout was proven to be much more difficult, and the methods I was using to make the layout was a slow and arduous process that was not ideal for a project of this length. I have decided that recreating the layout onto the google slides with some changes would in the long term save me time.

I had decided on a rainbow color scheme once I began using Google Slides, each chapter would be a specific color of the rainbow starting with orange and ending with purple. I have decided this because I am slightly unconventional with my use of colors and decorative visuals. I figured as long as I have done the research and shown I do care about this project; a slightly unconventional color scheme would not do any harm. It is colorful, some visuals are digitally illustrated, but the information there is reliable. In the beginning, I had continually made changes to the color scheme because the first colors I have chosen did not seem vibrant enough. After changing the colors many times, I had settled on the colors, but throughout making the project, I still made subtle changes to the color scheme.

I had recreated the layout after looking at several other field projects that had been created in the past. See Figure 4. below to look at the past projects I've taken inspiration from.

# Tell Me How It Ends

Intermediate Reading and Writing



Ivy Johnson

## Introduction

### To the Instructor

This project will support ESL teachers and students who experience the problems of silence and lack of enthusiasm in classroom. It outlines a framework for how instructors integrate various strategies and activities to help ESL learners, especially learners from East Asia, to increase motivation and willingness to communicate and interact with the instructor and classmates. Expected outcomes are improvement of student behaviors, such as increased willingness to communicate, improved classroom activities participation, positive correlations with language learning strategy application, and increased academic performance.

The activities in this book are examples for intermediate and master's level students; Please adapt the content according to the level of students.

Introduction.....	4
❖ Welcome to Engaging Students.....	4
❖ To the Instructor.....	5
❖ Unit Structure.....	6
Unit 1 Innovative Spirits.....	7
❖ Designing Thinking.....	7
❖ Activity 1 Spaghetti Tower.....	9
❖ Activity 2 Designing the Future Classroom.....	14

Figure 4. Taking inspiration from fellow MA TESOL students Ivy Johnson and Lusha Sha's field project for my own project layout.

I had utilized some of the formatting techniques I had learned from my colleagues in past courses. A past TESOL MA student, Leticia, had taught me how to use Google Slides to make formal looking reports, lesson plans, and guidebooks. Figure 5 below is a visual representation of

how to use the google slides to create a cover page layout that would unify all the other pages in the document. Using this strategy, and later deleting the markers that were only used for guide, every page of the document will look symmetrical to each other. This would avoid from have a page that has the heading for a chapter or section be slightly higher than the headers from the previous pages. When using this for another project, it is also possible to make the left or right margin half an inch wider if the project will be printed and stapled together. Layout of traditionally published textbooks all have one side of the margin wider because of book binding purposes. I had decided to make the margins all around one size to save time, and I believe most people would prefer to read the documents online now a days.

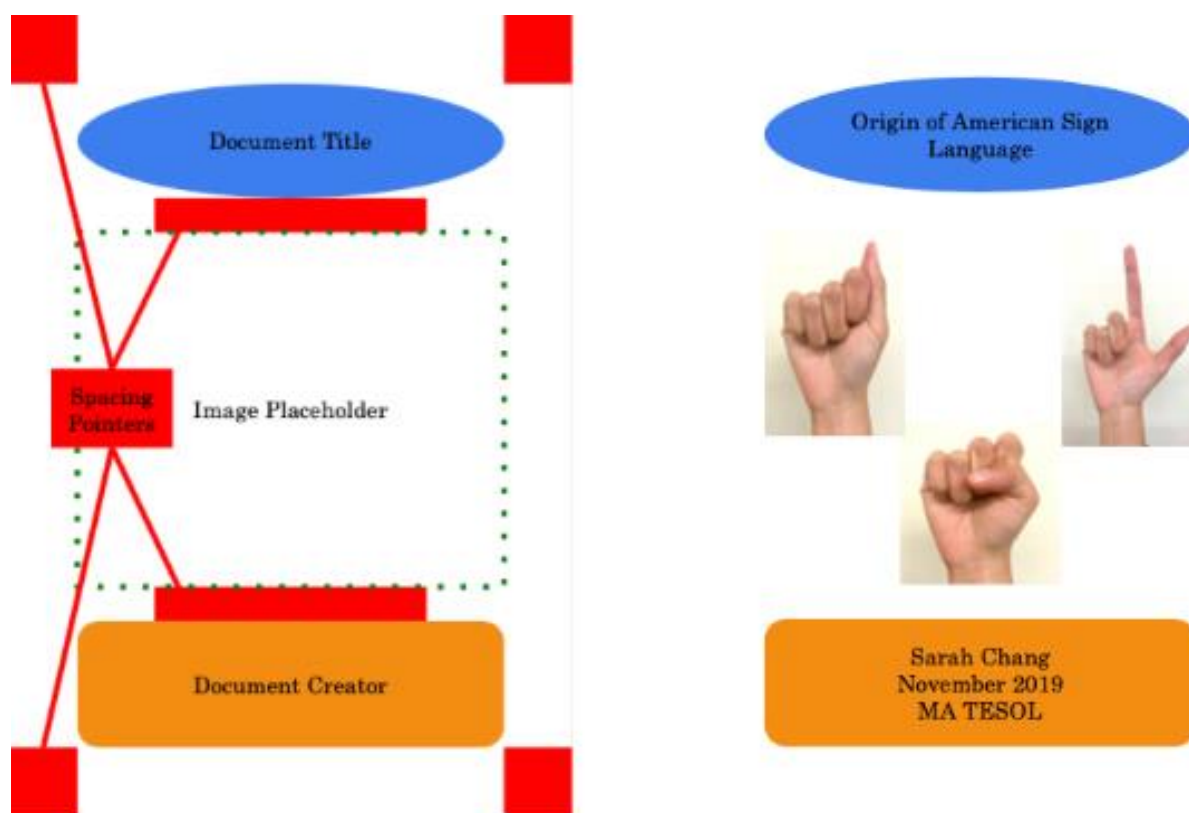


Figure 5 shows an example of what a cover page for a document may look like when using Google Slides to create the layout.

When Leticia was explaining this to our group, she told us to look at the format of the traditionally published textbooks that we had all bought for class. I had recreated the layouts for all the different sections of the project and added in several pages for each of the different chapters and sections before adding in the content. I used a color system to differentiate between the chapters. It is clear to see from the Table of Contents page I created above, which colors correspond with which chapter. I had created the title page and table of contents before beginning adding in information within each of the chapters. Somewhere during the process of referencing different field projects other students have created in the past, I realized that I was missing an introductory section that explains the organization of the project and how to use it.

The first chapter “What is Required by Law?” is the orange chapter, and it is the third lengthiest chapter in the project. It is divided into two subsections titled, “Educational Policies” and “Private and Public Universities”. When I started developing this chapter, I consulted many governmental websites that explained in detail the different educational policies that govern the educational system in California. From different governmental websites and documents, I have gathered detailed information about the three different Federal laws that protects the rights of disabled students: Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA). I explain how these three Federal laws affect what is being offered as accommodations in the schools. While looking at the policies and Federal laws, I also looked at the types of accommodations that are provided in several of the well-known universities in California. These brief university profiles should give an EL educator some idea of what services are available for DHH ELLs. I added this subsection because this is what would want to know when I consider what other services can I provide to my DHH ELL as an EL educator. When attempting to make improvements, it is good

to consult other professionals with the same goals. The universities I had included in this project are San Francisco State University (SFSU), Stanford University (SU), and University of California, Los Angeles (UCLA). I included the brief profiles, so EL educators may get an understanding about what other services and accommodations can be made available for the DHH ELLs in their respective universities. I went onto each university school websites to acquire information about the types of services that are available for the disabled student body of each of the universities. I think we can learn a lot about what we can do by learning about what other universities do for their students.

This chapter is an important part of the project because some EL educators are not acquainted with the Federal laws related to DHH education. They are uncertain about how to assist the DHH ELLs in their classrooms. These educational policies are essential information that EL educators should be aware of, and I have provided this section for this purpose. This section will help prepare EL educators to work with DHH ELLs in their classrooms. If more information is required, looking at government websites for more information is a great place to begin as this project cannot provide all the answers. I had one semester to attempt to create a project that is clear and presents what I deem to be useful to EL educators. If I were to add anything else to this chapter, I would have liked to add more about each of the policies and Federal Laws I have mentioned because I felt like I could add more details about each of them. This chapter was difficult because I was not very knowledgeable about Federal Laws and policies related to Special Education and the rights of disabled students.

There was another chapter that was taken out because I did not have enough information to fill this chapter. This chapter was about the educational concerns of DHH ELLs, their parents, and the EL educators. The articles I had found, which I had thought would have good

information did not end up being very useful. Before starting the development of this project, I had briefly scanned through the articles I had found to make sure that it contained information I can use to develop the project. Perhaps I was not very thorough when scanning through the articles because I did not end up keeping this chapter. This chapter was the second chapter, and the yellow chapter in the project. My advisor recommended me to take this chapter out entirely, she explained to me that if I were to include this chapter I would need to fill in this chapter with more information because I did not actually address what educators who are the readers of this project would be reading this chapter in searching for. I had made this chapter about the educational concerns of all the parties involved, but I did not mention about any of the concerns throughout the chapter. I was worried because I knew this chapter was not as filled out as the other chapters, but I had wanted to keep this chapter because I believed it was important to include. My advisor had suggested me to take it out because if I cannot find sufficient information to add to the chapter, it would be better for me to take out the chapter as a whole. My project had already had significant length, so I did not need to include this chapter for the purposes of adding additional pages. I had thought about changing the color scheme to make the rainbow color scheme again, but I did not feel like messing with the colors anymore. Any readers looking at the Table of Content and the subsequent chapters would still be able to tell that I followed a rainbow color scheme.

The second chapter is the green chapter, which provides information about the different types of experiences DHH ELLs may have priors to attending a public university. Some DHH ELLs wear hearing aids, some have cochlear implants, some are able to use ASL to communicate, some cannot sign in ASL, DHH ELLs' backgrounds and experiences vary greatly. The DHH ELLs are the same to their hearing counterparts in this context. I have also included

some misconceptions about DHH individuals, and ASL as a language that many people still falsely believe to be facts. The last subsection of this chapter explains the origin and history of ASL, and the formation of the first deaf university in the United States. In the past, I had written a paper about the history and origin of ASL, so I was already acquainted with the history and origin of ASL, but I did reference the paper when filling out the subsection because I wanted to make sure that my information was accurate. Some of the references in this chapter is also the references for the paper. For that paper on the History and Origin of ASL, I have read many books and articles which provided details about ASL. Several books have a chapter or two about how it made its way from France to America, and other articles contained more explicit details about how OFSL have similarities to ASL. My past paper was an invaluable resource that I heavily used as reference, and to guide the completion of that subsection.

The third chapter is the blue chapter, and it is called “What’s Effective Inside a Classroom?”. It is the lengthiest chapter in the entire project with one more subsection than the other chapters of the project. This chapter is divided into three subsections, and they are called “Teaching Approaches and Practices”, “Tips for EL Educators”, and “Useful Resources”. In “Teaching Approaches and Practices”, I explain what the Language Experience Approach (LEA) is, and how educators typically use this approach to teach English in a classroom setting. I also explain how it can be implemented in other classrooms. According to Stauffer (1980) LEA is a teaching approach that have been known to be effective on improving DHH ELLs English language acquisition. I also explain what cued speech is in this subsection after reading through ling and clarke’s article. In this subsection, I have also included information for implementing EFL teaching strategies in a classroom with DHH ELLs. Goldberg and Bordman (1974) recommended using EFL/ESL teaching strategies for DHH ELLs because according to them,



they struggle with similar challenges that an ESL learner struggles with. These methods have been known to be incredibly effective for DHH ELLs in the K12 system, with some modifications it may be effective for adult DHH ELLs as well. The next subsection in this chapter is the “Tips for EL Educators”, which was originally a subsection in the first chapter, “What is Required by Law?”. My advisor told me to move the subsection into this chapter because the first chapter was all about Federal laws and educational policies, so it did not make sense for “Tips For EL Educators” to be in that chapter. I had followed her advice and moved the subsection to this chapter. After moving the subsection to this chapter, I do believe that it did make sense to move it. The project flowed more smoothly with that subsection in the last chapter of this project. On the USF website, there is a page which have tips for educators to keep in mind. The web page listed many different tips, and not all were applicable to DHH ELLs, so I selected and rephrased the tips that I believe to be useful for EL educators when working with DHH ELLs in a public university sized classroom setting. The third subsection is called “Useful Resources”, and I have included some resources that may be used in the classroom by the students. This is in this project because I think it is a good idea for EL educators to be aware of the resources out there that may be helpful for their students. This guidebook is a for EL educators, but it is also meant to be used to make DHH ELLs feel welcomed and to encourage trust between EL educator and DHH language learner. On the other hand, if I had more time to work on the project, I may cut out this subsection to include other useful resources because I believe this subsection is my weakest section of the project.

The last section of the project contains all the references for all the journal articles, websites, and books I looked at while developing this project. This section has a purple background, and the references are in alphabetical order. I have references for all the pictures I

used in the project, but my advisor had advised me to take out all the references because all the images from the Creative Commons have titles that do not clearly describe the image, so when looking at the reference section, it is difficult to tell which reference refers to which image. I was also told to make captions for each of the images, so this project will be accessible to individuals using a reader to read this guidebook. This is a project about making class materials accessible for DHH ELLs, it would not be great for me to create a project about accessibility and limiting accessibility to other individuals with disabilities. Some illustrations and photos were created by myself on my phone using an app called Artstudio. I have created the illustrations and photos when I could not find an image, illustration, or a photo that portrays the idea or atmosphere that I wanted. For those illustrations and photos, I had included a different caption that is slightly different from the captions of the images found on Creative Commons. There are certain pages that had room for a decorative visual, and I would attempt to brainstorm what type of visual I want to have there and try to find it on Creative Commons. If I cannot find it on Creative Commons, I will create the visuals myself. Figure 6. Below shows some of the visuals I had created on my own. Some illustrations are drawn by me using my index finger using an app on my phone called Artstudio. It took a while to finish the illustrations, but I thought it was worth the time to get the exact visuals I want for a specific page. I looked up images to similar pictures that I had wanted to put in this project, I used the pictures I have found online as references to draw my own illustrations. I had also sized the images, so the overall page looked nice, and the visuals were not too big, but also easily recognizable from afar. I had learned to use the spacing wisely, my advisor and professor from past semesters, Dr. Sedique Popal, had mentioned that the layout of the page should be balanced. A page should not look too busy, but also not too spacious. If a page were too busy, the eyes would not know what to focus on. If the

page is too spacious, then it is not being utilized wisely. The page should not distress the reader of the project, or make the reader feel like the project could be shorter in length.



Figure 6. Some photos and illustrations were created by myself using a phone app called Artstudio, and some of the illustrations were created right on Google Doc.

Before replacing the visuals with ones, I have found on Creative Commons or created myself, I had simply used visuals I have found on Google because I did not like having an empty placeholder. I had used visuals found on Google with the express purpose of replacing them with visuals that are free to use. However, I had trouble finding a website that would allow me to search for images that are free to use, I had thought about searching for photos on photo bucket, or other websites that are used to store images. My advisor recommended the Creative Commons website after I told her about my dilemma. I proceeded to replace every visual on the project either with one I created myself or found on the Creative Commons website. When I was

finished with field project, I had a few references that I had forgotten to add, so I had to add in the additional references that I had missed. Once I was finished adding the missing references, I took a look at the whole project to make sure nothing was out of place because I wanted everything to look organized and clean.

Overall, I am very pleased with how my project turned out. However, if there was more time, I would have definitely included some other information that might be useful for fellow EL educators. However, with the time I had, I created the project to the best of my abilities with the intention of it to be a useful resource when EL educators are working with DHH ELL in a public university classroom setting. In the future, I have plans to do more research in this area, and I may make slight changes to this project. I may explore other areas of DHH ELL education that are related, but not entirely the same.

### The Project

The project in its entirety can be found in the appendix.

## CHAPTER IV CONCLUSIONS AND RECOMMENDATIONS

### **Conclusions**

When thinking about English Language Learners (ELLs), usually the type of learners that come to mind are those who speak a different native language or came from different countries. Seldom do people think about the ELLs who are also struggling with a disability. However, there are ELLs who are also Deaf or Hard of Hearing (DHH) individuals. DHH ELLs were the focus in this project because studies have shown the literacy levels of DHH ELLs in the public-school system are lower than what is expected for the grade level (Allen, 2002; Conrad, 1979; Marschark & Harris, 1996; Mayberry, del Giudice & Lieberman 2010; Musselman, 2000). There is a 22.5% increase in DHH ELL population in the year of 2000 to 2011 (Cannon & Guardino, 2012). There is no visible increase in research publications on the topic of DHH ELL Education (Cannon & Guardino, 2012). This propelled me to develop this project to shine a light on this topic because this area can benefit from more research studies and development of resources.

While developing this field project, Stephen Krashen's Affective Filter Hypothesis is the theory the field project is based on. Krashen theorized that there are four main factors that will affect the acquisition of a second language for a second language learner. These four factors are the level of anxiety, motivation, attitude, and self-confidence the learner has entering a learning environment (Du, 2009). If a language learner has high levels of anxiety, low motivation, a negative attitude, and low self-confidence then his or her affective filter is not lowered. This will cause an invisible mental block to form. Applying this theory to this project, DHH ELLs are language learners with the additional stress and anxiety of having to navigate an educational setting with a disability, so their affective filters will be high. This guidebook was created as a resource for EL educators to use in a classroom setting with university aged DHH ELLs. This

project took around a month to develop, and I had filled in the chapters with as much information as I could. However, given the time restraints, I am not able to include everything that I wanted. It is my hope that EL educators will use this guidebook as a resource to help make their classroom more comfortable for DHH ELLs. My hope is that after this project is available for the public, there will be more resources developed and more research studies done for DHH ELL education.

### **Recommendations**

I recommend EL educators to use this project as a resource, but to also look for other resources because I was unable to add as much as I wanted with the time constraint. I only had one semester to complete the field project, so I cannot add everything I wanted. There are many websites and resources online that one could find, I have created this project so as much of the information is in one place, but I can only include so much. There is also a section pertaining to policies and federal laws, and laws and policies may change. An updated resource similar to this project can be very helpful. Teaching practices, and strategies can also be updated and improved with time. New research can prove certain methods obsolete or come up with another innovative methods worth exploring. There are many areas with DHH ELL education alone that have not been widely explored, and there are many projects and research studies that can be duplicated, updated, or developed.

My second recommendation is for there to be more exploration into DHH ELL education because there is a lack of research into DHH ELL education, primarily regarding DHH ELLs over the age of 18. I have chosen to do a field project as my final piece of work, but research into Adult DHH ELL education is also greatly needed. There are many different related topics to conduct a research study, write a thesis, or create a field project for. I was curious about the

relationship between an ASL interpreter, the classroom educator, and the DHH student. I was unable to conduct more research on this topic because this project does not have much connection with how an ASL Interpreter negatively or positively affects the learning of a DHH student. However, I have spoken with a friend who is learning ASL and active in the deaf community, she explains to me that ASL interpreters in the classroom sometimes negatively affects a DHH individuals learning because of communication issues. Here are some ideas of areas that can be explored within DHH ELL education:

- Influence of Interpreters to DHH student's Academic Performance
- Can ASL be incorporated in the classroom as a tool to learn English?
- How does DHH students fair in Public schools? A case study.
- How does having ASL as a first language affect an ELL compared to a DHH ELL who has not acquired ASL as their first language? A research study.
- What are the challenges and concerns that DHH ELLs face? A case study.
- Why do DHH ELLs have trouble keeping up with their hearing peers in their literacy levels? A case study.

My third recommendation is for educators to see this project as a resource, but also think about how different teaching approaches that I made not have mentioned in this project can be adapted to use for DHH ELLs. There are many different potentials for what is already available. Sometimes teaching approaches and strategies are said to be most effective for younger learners, but I think some approach may be adapted for use when EL educators are working with DHH ELLs.

My fourth recommendation is for EL educators to be on top of the resources out there that may help the DHH ELLs. DHH ELLs will certainly be aware of the different resources that

are being developed for them, but EL educators can form a trust if they are also aware of educational resources for the DHH ELLs. For the same reasons, having more understanding of deaf culture is a good idea. I had provided a subsection in this project that includes a brief look at the background of ASL, but there is a lot more to learn than what I can provide within the pages of this project. Deaf Culture is very complex, and their history is something that is worth learning about. Here are some recommended books and articles for any readers who are interested in learning more about the origin or history of ASL, deaf culture, deaf communities, or teaching practices for DHH ELLs into if anyone is interested in deaf culture and its community:

- Deaf Culture: Exploring Deaf Communities in the United States by Irene W. Leigh, Jean F. Andrews, and Raychelle L. Harris
- Deaf Heritage: A Narrative History of Deaf America by Jack R. Gannon
- Sign Language Archaeology: Understanding the Historical Roots of American Sign Language by Ted Supalla, Patricia Clark
- Everyone Here Spoke Sign Language: Hereditary Deafness on Martha's Vineyard by Nora E. Groce
- The Language-Experience Approach to Facilitating Reading and Writing for Hearing-Impaired Students by Carolyn Ewoldt and Frieda Hammermeister
- English Language Instruction for the Hearing Impaired: An Adaptation of ESL Methodology by J. Philip Goldberg and Marcia B. Bordman
- Theory, Research, and Practice for Students Who Are Deaf and Hard of Hearing with Disabilities: Addressing the Challenges from Birth to Postsecondary Education by Caroline Guardino and Joanna E. Cannon



Here are some recommended video materials to watch, which recounts the history and origin of deaf culture and ASL. There is a wealth of knowledge to learn about ASL and deaf culture, and it is helpful to acquire information from different resources. My research during the creation of this project applied a similar approach. I read many portions of many books, watched many informational videos, and read portions of many journal articles to acquire the necessary information to complete the project.

- Through Deaf Eyes by Lawrence Hott and Diane Garey
- “Opening Our Ears to the Deaf” TED Talk Presented by Pamela Weisman

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APPENDIX

**Welcoming Deaf or Hard of Hearing English Language Learners: A Guidebook for  
English Educators**

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# Welcoming Deaf or Hard of Hearing English Language Learners

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Sarah Chang

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# **Welcoming Deaf or Hard of Hearing English Language Learners: A Guidebook for English Educators**



**Sarah Chang  
University of San Francisco  
December 2019**

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# Introductions

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Image created by Sarah Chang: Chalkboard writing "Dear DHH ELL Educators"

## **Dear Fellow Educators:**

This project was created to be a helpful resource for all of you who are struggling to assist their students who identify as Deaf or Hard of Hearing (DHH). This project provides an introduction to Federal laws, policies, suggestions, concerns, and many of the students' language backgrounds, and how all these components affect their EL education.

This project also provides some teaching methods and practices that are known to be effective with DHH English Language Learners (ELLs). Please select or adapt any teaching methods or suggestions according to the language level of the students and the needs of the class.



Two green apples on an apple tree.

## **The Features of this Guidebook:**

This project will provide explanations for the four elements an EL educator should understand when they have DHH ELLs in their classroom.

The subsections within the three chapters are:

- ❑ What are Required by Law?
  - ◆ Educational Policies
  - ◆ Private and Public Universities
  - ◆ Suggestions
  
- ❑ Student Experiences
  - ◆ Language Backgrounds
  - ◆ ASL: Misconceptions and Brief History
  
- ❑ What's Effective Inside a Classroom?
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  - ◆ Useful Resources
  
- ❑ References



# What is Required by Law?

## Educational Policies

Students who identify as DHH or have other types of disabilities are protected under several Federal laws. Under the Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA) certain special services and accommodations are provided to students with disabilities.



**National Association of the Deaf (NAD)**

Photograph taken by Sarah Chang: ASL for National Association of the Deaf.

The National Association of the Deaf (NAD) Government Affairs and Law Center specifically states the student's rights to file a complaint if appropriate accommodations are denied by a college or university.



Illustrated by Sarah Chang: Gavel with creamy yellow background.

The Rehabilitation Act of 1973,  
Section 504, states:

*No otherwise qualified individual with a disability in the United States...shall, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.*

Section 504 protects students who identify as DHH, and those who have disabilities, from discrimination. Any government funded institutions must provide accommodations to individuals who identify as DHH or have other disabilities.

There are requirements that a school must follow under ADA guidelines. However, ADA only requires school districts to provide equal opportunities. Under ADA, schools are only required to provide equal access to opportunities and accommodations when requested.

Section 504 and ADA work together to ensure that school board meetings, extracurricular programs, teacher conferences, recreational activities, social and cultural activities, as well as adult education are not excluded to any DHH students, parents, or staff members. Section 504 and ADA ensure that all students are entitled to equal access and equal opportunities.

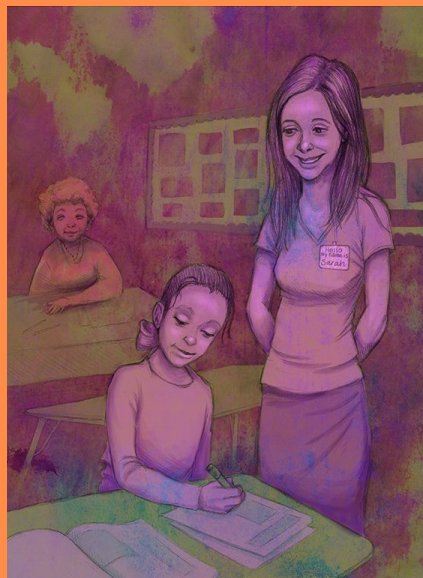


Image created by Sarah Chang: Warning Sign.

Legal actions can be taken if schools do not offer appropriate accommodations for students who have made a request for it.

Public universities and colleges will have a disability student center or office dedicated to the service of students who have learning disabilities. From there, a student can request special accommodations, and based on the procedures of the school, accommodations will be made for the student.

If a student were to ask for help about how to get accommodations for his or her disability, if an educator knew this information, and was able to provide to a student the student would feel more comfortable to the teaching and understand that the teacher to assist them.



A teacher overlooking a student's schoolwork, and she is pleased.

Different universities will offer different accommodations for their students, and it is advisable to investigate what kind of support is being offered to DHH students who are in your classes.

Private Universities are not funded by the government, so they might function differently from a public universities, but they are accountable to provide access to all students.



Illustrated by Sarah Chang: Balancing scale.

It does not matter where an educator decides to teach in the States, the school is held accountable to provide the necessary accommodations and services. You will benefit in knowing what is lacking and what can be done to provide as much as they can.

## Private and Public Universities

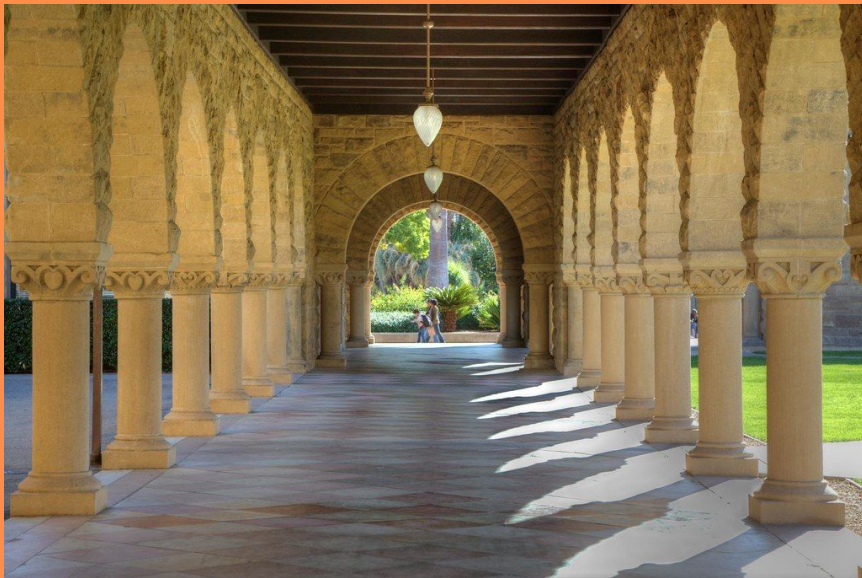
The following section highlights the different types of services provided at different universities. Reviewing each university profile, will assist you in understanding the types of support a student with DHH may benefit from.



San Francisco State University's mascot, Gators.

San Francisco State University (SFSU) is a public university in San Francisco. It offers sign language interpretation, real-time captioning, assistive listening devices, and note-taking assistance to students who identify as DHH. The interpreters provided to the students of SFSU will translate content in class into ASL or another form of sign language that the student prefers. SFSU students can also be provided with professionally typed notes for a specific lecture.

Stanford University (SU) is different from SFSU because it is a private university in Stanford, California. It offers different types of accommodations for DHH students. SU offers peer tutors and has a writing center fully staffed with professional writing tutors to assist with any writing needs.



A hallway of Stanford University, you can see two students in the distance in the center of the archway.

Some students benefit from typing up their own class notes on a laptop, with the approval of a class instructor SFSU students with DHH may also use laptops during class. To learn more about other types of accommodations that are being offered to SFSU students with DHH or other disabilities, you can visit the website: <http://access.sfsu.edu/note-taking>.

University of California, Los Angeles (UCLA) is home to the largest and most active deaf community in the nation. The school offers an abundance of helpful resources that will make UCLA students who identifies as DHH have more comfortable experience there.



UCLA Campus buildings.

SU students can get other accommodations that will be available to them depending on the nature of their disability.

To learn more about other types of resources that are being offered to SU DHH students, you can visit the website:

<https://slc.stanford.edu/learner-variability/resources-students>.



The school ensures the safety and equal learning opportunities to their DHH student body. UCLA's Center for Accessible Education (CAE) is for students who are DHH or other disabilities to get the accommodations they need. The following services are made available to any UCLA student that identifies as DHH:

- ◆ Sign Language Interpreters
- ◆ Real-time captioning for Lectures
- ◆ Note taking Services
- ◆ Tutors for Additional Academic Assistance
- ◆ Assistive Listening Devices
- ◆ Computerized Training Programs
- ◆ Priority Enrollment
- ◆ Special Workshops and Support Groups

For additional information about services provided to DHH students of the UCLA Community, please visit: <https://www.cae.ucla.edu/Hearing-Brochure>

**WHAT ELSE DO  
YOU PROVIDE?**

Image created by Sarah Chang: "What Else do You Provide?" Block text.



UC Berkeley University Building.

The following services are made available to any UC, Berkeley student that identifies as DHH:

- ◆ Sign Language Interpreting and Transliteration
- ◆ Real-Time Captioning
- ◆ Assistive Listening Devices
- ◆ Portable Assistive Listening Device
- ◆ Note Taking Services

For additional information about services provided to DHH students of the UC Berkeley Community, please visit:

<https://dsp.berkeley.edu/about/policies-guidelines/communication-services>.

# Student Experiences

## Language Backgrounds

It is important for an educator to understand the students in his or her class because much of teaching is engaging students and understanding how to reach them. It is especially important for an EL educator to understand where his or her DHH ELLs came from.

Understanding the language background of a DHH ELL will help an EL educator understand what kind of assistance will be helpful to the DHH ELL. It will also open up a pathway for a smoother communication.

Here is a helpful guideline you can follow to try to understand the background of your DHH ELLs.



Scissors, ruler, and measuring grid.

To understand the language backgrounds of the DHH ELLs in a classroom, use a survey asking which languages have they acquired, and their skill levels in their first, second, and third languages.

If you wanted to develop your own survey, be detailed in the questions. This checklist is to help you understand the language background of the DHH ELLs in your classrooms.

Give them a survey with detailed questions, which asks them about their language background, and the language they prefer to communicate in.

In Gallaudet University, DHH students came from a variety of different language backgrounds.



Different languages for saying “hello” and “goodbye” inside dialogue boxes of different colors.

During the early years in Gallaudet University, there were many DHH students that knew either the local sign language of Martha's Vineyard called Martha's Vineyard Sign Language (MVSL), British Sign Language (BSL), or many of the other sign languages that the students have grown up with in their small hometowns.

As was with Gallaudet University, students who are DHH came from all different types of language backgrounds. Some DHH ELLs may not have ever learned any type of Sign Language, some may only know how to sign in Chinese Sign Language or another nation's sign language.

There is also the possibility DHH students are fluent speakers of the language of their country.

Certain DHH ELLs may have hearing aids or other types of devices and assists them with their disability. Some DHH ELLs may have cochlear implants, and it is important to also understand how the cochlear implant affected the academic performances of the DHH ELLs in the classroom.

Hearing loss is often categorized in 6 different degrees, ranging from mild hearing loss, moderate hearing loss, moderately severe hearing loss, severe hearing loss, severe profound hearing loss, to profound hearing loss (Lederberg, Spencer, & Schick 2013). Some people are not aware that not all people with hearing loss have zero percent hearing, there are degrees of deafness, and a number of people diagnosed with hearing loss can still sounds in low frequencies, it is important to understand the differences in what each person with hearing loss can hear. This is especially true for you all who have DHH ELLs in your classrooms.

Even for an individual with fitted sound amplification devices, it is still difficult for the individual to perceive speech (Harkins & Bakke, 20011).



A man showing the hearing aid he is wearing.

## ASL: Misconceptions and Brief History

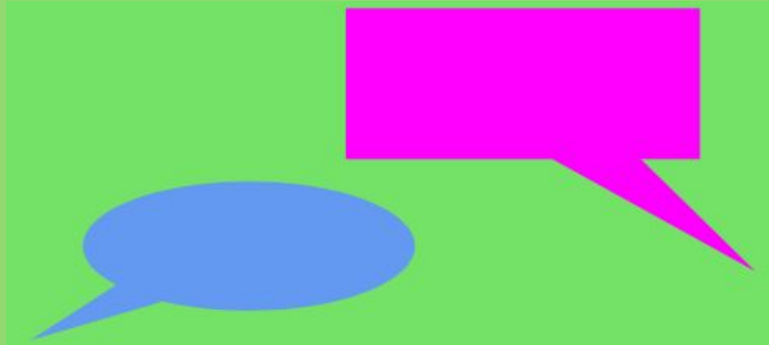


Image created by Sarah Chang: Two dialogue boxes of different colors.

Some people don't realize that identifying as DHH does not mean that the individual will be able to communicate using sign language. The majority of DHH individuals are born to parents who are not DHH, and as a result, the parents would not have any prior experience with any types of sign language to pass on to their children. Thus, it is important for instructors to understand the best way to communicate with an individual who identifies as DHH.

Some DHH individuals only know the spoken language of the country he or she is from, or the sign language of the country he or she is from. With DHH ELLs, there are a lot of different language backgrounds that an ELL may have.

DHH ELLs can also come from various different language backgrounds. Some DHH ELLs can speak English, and will prefer to speak to classmates and teachers in English, some DHH ELLs will speak in English while signing.

You need to keep in mind not to assume that DHH ELLs will definitely understand ASL, and would definitely prefer to communicate in ASL.

As an English as a Second Language (ESL), or English as a Foreign Language (EFL) Educator need to keep in mind that deaf students who are born to hearing parents may come to class having not acquire any language, this makes up the majority of the deaf community, only a few are born to deaf parents and this will have learned sign language as their first language (Goldberg and Bordman, 1974).



Photograph taken by Sarah Chang: ASL sign for “ASL”.



ASL is the sign language widely used in America and parts of Canada. In different parts of the world, there are different sign language that are taught and used for communication.

There is a general misconception that all sign language is universal, and this is not true.

ASL is neither an extension nor a non-verbal version of English, they are two different languages.

It may be helpful for you to know a brief history about the origins of ASL, and how it developed. Who were the key players in ASL's long standing fight to become a full-fledged language.

A brief history about ASL will be detailed below.

However, ASL was not always readily regarded by linguists as a language despite meeting most criterias that made a language a language (Frishberg, 1975).

William C. Stokoe is one researcher that had contributed greatly to this, he was among the first to recognize the intricate language structures found in ASL.



The iconic statue depicts Thomas Gallaudet teaching Alice Cogswell the ASL letter “A”, the first letter in her name.

Stokoe observed DHH students at Gallaudet University sign, and he discovered that there are patterns in the way different signers signed. The signers were not making random signs and gestures. He published a seminal monograph titled *Sign Language Structures* (Stokoe, 1960).

Stokoe co-wrote alongside two deaf research colleagues, Carl Cronenberg and Dorothy Casterline, the first ASL dictionary.

In France during the 1760s the first public school for deaf people was established in France (Supalla, T., 2015).

ASL was brought over from France to America by a deaf man named Laurent Clerc. Clerc and Thomas Gallaudet ran into each other after some years, and they collaborated together. Clerc learned English from Gallaudet while Gallaudet learned Old French Sign Language from Clerc. They eventually arrived at Hartford and established American School for the Deaf in 1817. In 1864, they founded the famous deaf university together known as Gallaudet University in Washington.



Gallaudet University building.

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# What's Effective Inside a Classroom?

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## Teaching Approaches and Practices

LEA is an approach used with great success in teacher hearing ELLs of all ages reading and writing (Hall, 1978; Hildreth, 1965; Stauffer, 1976). LEA had also been used on DHH ELLs (Stauffer, 1980).

Here are the basic principles of LEA:

Students will tell an make up a story or talk about a personal experience, and the teacher will teach the student about meaning by using the story or experience the student had mentioned as the reading material.

As the story or personal experience is told my the students themselves, they understand the emotions they are trying to imply.

LEA highly emphasizes individualized learning by using a student's own interests, experiences, and creativity to learn reading materials.

Many different types of LEA approaches have been used for DHH ELLs' education, but have been as effective as the individual dictation approach. This approach is used along with other printed text to help further the learning of DHH ELLs.

According to Carolyn Ewoldt and Fieda Hammermeister (1986) it is a beneficial factor that the EL educator and the student sit together side by side because the student will be able to see what the EL educator is doing. When the EL educator writes something down, the student will notice it takes longer to write a message than it is to speak or sign it, and this will help them with the pacing of their dictation.

Especially for DHH ELLs who are trying to improve on their dictation, this is a really helpful factor of learning through the individualized LEA.

When utilizing LEA, some challenges may arise. DHH ELLs may be uncertain with how to dictate their experiences without prior practice (Ewoldt, 1986).

You may attempt to assist them by having a discussion with them, this will help them find the words to dictate their own experiences (Ewoldt & Hammermeister, 1986).

LEA as an teaching approach that can be effective on DHH ELLs is innovative. There is a long standing debate around the effectiveness of this approach.

As a result of insufficient methodological materials being designed to help guide you with teaching DHH ELLs, some of you had been required to develop your own methods and experiment (Malec, 2016).

Here are some other practices and teaching methodology that have been effective for other EL educators like yourselves (Goldberg & Bordman, 1974).

In Goldberg and Bordman's article, the methodologies are specifically EFL strategies that are used to teach English to DHH ELLs. It is important remember the difference between EFL and ESL, and make the necessary changes to fit with teaching ESL if used in a ESL classroom.

It is highly suggested for you to use English in its written form exclusively or as much as possible.

Malec recommended creating animated presentation for lectures rather than using PowerPoint presentation for lectures because the visual effects in the animation, videos, and still videos are much more stimulating for DHH ELLs (2016).

Keep in mind the pacing of the lecture, the text in the animation or slides needs to be fast enough to retain the attention of the students, but also be slow enough for the same DHH ELLs in the class to follow along.

Utilizing English films and tv series with English subtitles can also be a great way to teach the contents of the a lesson, and making it accessible of DHH ELLs.

According to Malec, it is helpful to go over lessons on grammar with different exercises that engages the different senses in the content of the lesson sticks with a DHH ELLs more (2016).

Despite of the shortage of resources for you, we can look at the methodology that have been effective in the past, and adapt for use when teaching DHH ELLs.

If a teaching method is effective for younger learners of English, those of you who teach older DHH ELLs might look into how to adapt it for your older DHH ELLs.

There are certainly ways to update, adapt, change, and modify old practices.



Lightbulb



According to Dr. R. Orin Cornett, it is very helpful to provide DHH ELLs with information on phonological structures of English through visuals in order to help with the development of verbal language (Cornett, 1967; Cornett & Daisey, 2001).

The basic rules of cued speech comes from using the movement of the mouth plus the hand shapes to instruct DHH ELLs in how to verbally form each word. Each of the eight handshapes symbolizes groups of consonants and the location of the hand will tell the DHH ELLs vowels and diphthongs.

Cued speech relies on DHH ELLs watching you carefully to see the cues in order to learn. In a larger classroom, this may be more difficult to implement, but this is a strategy for developing verbal language in DHH ELLs that is worth looking into.

The general consensus regarding cued speech is that DHH ELLs develop spoken language comparable to the spoken language of ELLs with regular hearing (Clarke & Ling, 1976; Cornett, 1967, 1977, 1990; Gregory, 1987; Kipila, 1985; Ling & Clarke, 1975; Nicholls & Ling, 1982).

On 2009, an English class for hard of hearing ELLs was conducted at John Paul II Catholic University. The class is taught in groups of 3 or 4. In order to get credit in English, the hard of hearing ELLs were required to pass a test.

The classroom is set up specifically to have good acoustic properties. Sound insulation wallpapers were used, and the classroom floor was fitted with carpets to reduce sounds made from moving around in the classroom.

This was a four year study that investigated the effectiveness of cued speech on two highly motivated hard of hearing Polish university students.

An eight item closed-ended rating scale and an adapted form of *Beginner's Intelligibility Test* (BIT) (Osberger, Robbins, Todd, & Riley, 1994) were the instruments used to measure the two Polish students' intelligibility.

The final results gathered from the study shows that the two student's performance have both improved significantly.

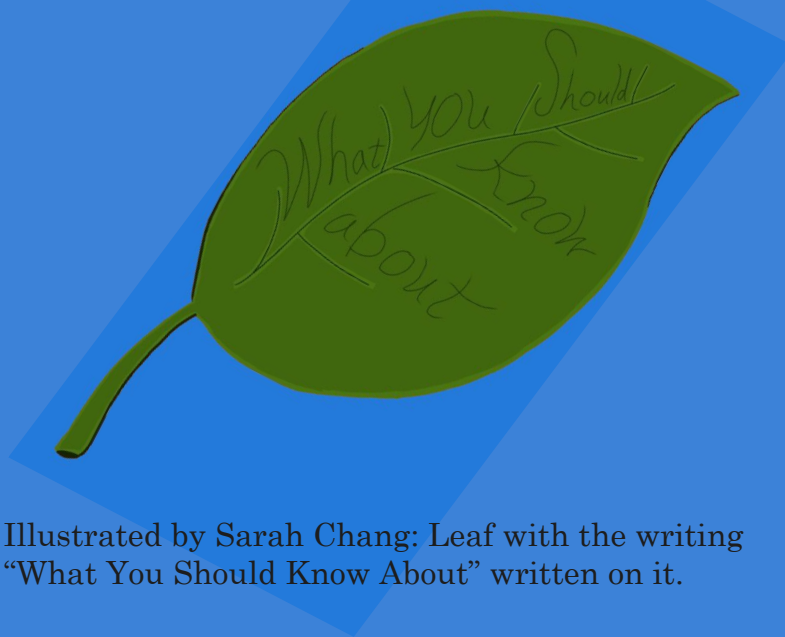
However, more studies need to be conducted on cued speech, two test subjects in a classroom that was set up with very specific conditions means that the study is not inconclusive.



An English teacher using a blackboard to teach English vocabulary words.

## Tips for EL Educators

Here is some information you should understand and some suggestions you should consider when preparing to have students who identifies as DHH in their classroom. These recommendations can be found on the Student Disability Service (SDS) page provided by the University of San Francisco (USF).



Illustrated by Sarah Chang: Leaf with the writing “What You Should Know About” written on it.

1. If a student is seeking accommodations without a letter from the SDS, the student should be referred to the offices by the teacher.
2. Due to the nature of a student’s disability, some assignments or class activity may be substituted with another assignment of equal weight or value.

3. If a student has difficulty taking notes during class sessions, the SS will assign a notetaker to the student.
4. You should avoid sudden movements, staying centralized in the classroom to make lip-reading easier for students.
5. You should remember to write important announcements on the board clearly making expectations for future class meetings easily accessible.

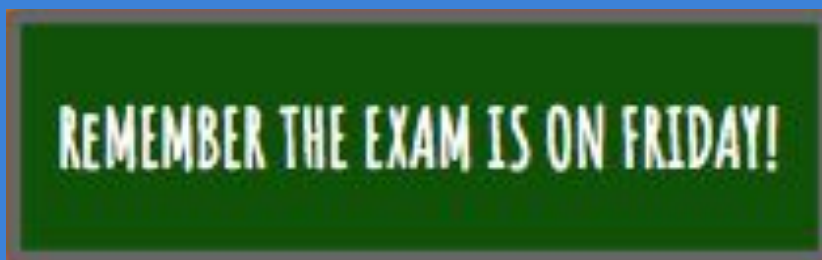


Image created by Sarah Chang: Chalkboard with "Remember the exam is on Friday" written on it.

6. You should face the student when speaking to them directly.
7. Whilst discussing in class, make sure every student understands to speak one at a time, so DHH students may also participate in the discussion.
8. You should keep in mind that DHH students are unable to take in oral instructions while reading or writing.

9. You should confirm that a film, video, or documentary have written transcripts or closed captions before showing it in class.



Illustrated by Sarah Chang: DHH ELL having trouble understanding his teacher because the teaching is talking while facing the whiteboard.

These suggestions may seem apparent to you. However, whilst teaching, you may have formed habits that you may not have recognized as being a negatively affecting your DHH ELLs' learning. Some habits are difficult to control!

DHH students often express their inability to comprehend class content.

It is also important to remember that DHH ELLs should not be expected to rely on lipreading.



Students sitting around several tables having discussions.

Here are some suggestions as offered by experts at Gallaudet University:

- ◆ When speaking to a student who identify as DHH, use respectful and inclusive language to speak to them.
- ◆ You should maintain the same high expectations for DHH students as you do for your students without hearing loss. This extends to other students and other educators in the school as well, DHH ELLs should be treated as equally capable peers (Martens, Holmes, Harris, & Brandt, 2007).
- ◆ It is important to learn about the family background and language background of the DHH students.

- ◆ Understand the preferred method of communication for each of the DHH students in the classroom.
- ◆ Create visual supports for all of the classroom contents, make sure everything is easily accessible to the DHH students.

According to Kelly K. Metz (2017) there are five elements that are key to a DHH students' success. In her 2017 publication, Metz is referring to general DHH students, but DHH ELLs can also benefit from four of these elements mentioned by Metz.

As mentioned before in this project, having equally high expectations for DHH students as one does for students who are not DHH is the first important element to a DHH ELLs' success. It is important for the educator not to see DHH ELLs as less capable than the ELLs who are not DHH.

It is also important you to be able to communicate with the DHH ELLs because a majority of foreign language learning requires effectively being able to communicate with the educator. This is the second element that will help with a DHH ELLs' academic success.



While giving instructions, continue to evaluate and observe how the DHH ELL is doing. Make sure that the instruction is not too fast for the DHH ELLs. Make adjustments, and help the DHH ELL to understand the material before moving on.

It is important to remember to treat DHH ELLs like other ELLs in the classroom. When a DHH ELL need discipline in the classroom, the educator in the classroom has every right to discipline the student the way he or she sees fit without running it by a specialist or someone part of the student's support team (Heidi M. MacGlaughlin, & Donna M. Mertens, 2014). Keep in mind that not all ELLs who identify as DHH knows ASL, so ask them how they prefer to communicate in class is very important.



Teacher lecturing in the classroom.

DHH students may have cochlear implants that helps with their deafness.

It is helpful to understand the student's experience by giving them a form to fill out which prompt them to give information about their language experience before and after the cochlear implantation.

These forms are meant to assist the students, and figure out how to best accommodate their needs.

Students with cochlear implants can experiences many challenges with focusing on lectures if there are a lot of noise in the background, so it is important to consider the classroom acoustics.

- If possible, make sure the classroom ceiling tiles are made from acoustic tiles, and it is no higher than 10 feet.
- Using sound-absorbing carpeting or other treatments is also in the best interest for the student with cochlear implant.
- While class is in session, it is suggested that classroom windows and doors remained closed.

For a student with a cochlear implant, it is important to take into account distances and noise.

Here are some more recommendations for making the class sessions more accommodating for students with cochlear implants:

- Adjustments can be made to reduce the auditory signal being weakening by the distance between the student and educator.
- You should provide students with cochlear implants with preferential seating because it is important for their cochlear implants to work effectively.
- Aside from making adjustment to the classrooms, specialty area educators should received in-service training prior to working with students who are DHH.
- You may want to contact experts and specialists that are working directly with DHH ELLs if you have any areas you are have questions about.

There may be more resources that can be acquired which will provide more information about more actions that can be taken that are to be kept in mind when working with a student using cochlear implants and other hearing devices.

### **Useful Resources**

Here are some resources that may not be useful to you in a direct way, but may help the DHH ELLs inside the classroom. As an educator, it may be a good way to connect with students if some of the resources DHH ELLs may consider using are suggested by you.

Skinner Cheng is a 2014 MS graduate of the Computer Science Program in USF. He participated in class discussions, gave presentations, etc. On the outside, it didn't seem like he was struggling with his academics. However, what people may not realize is the struggle he faces daily. Cheng is deaf, and he has utilized his skills in Computer Science to develop an app that will help DHH individuals such as himself communicate with peers and professors who are not DHH. Ava is the name of the app and the company that developed the app.

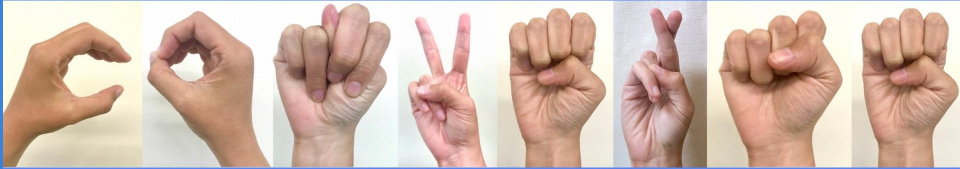


Image created by Sarah Chang: ASL fingerspelling the word “Converse”

Ava is a voice-recognition app that can translate conversations into text, so DHH individuals can read what is said as the app translates the words. The app is still in its early stages.

Ava hasn't been able to overcome challenges that make voice-recognition apps have. Accents and background noises remain a problem to be resolved. However, Cheng is hopeful the app will be a positive step for the 360 million DHH individuals in the world.

Ava is now available for use on any major smartphones, it can be used in class with the instructor's permission. There are in-app purchases involved. An user will have to purchase hours in the app in order to use it. This may be important information for someone that doesn't want to spend money on an app.

Rogervoice is another app created by Olivier Jeannel, a profoundly deaf entrepreneur. It is an app that helps deaf or hard of hearing individuals make calls, and this may not be a directly useful app in the classroom, but when a deaf student needs to contact a classmate or a teacher by phone, this app can help make the entire experience a little easier. A subscription is required to use the app, but it might be a useful tool for DHH students. Rogervoice transcribes phone calls into messages in text form, so a DHH individual will be able to understand what the person on the other side of the line is saying. This can be a very useful app, especially for DHH university students that are trying to make connections with their professors.

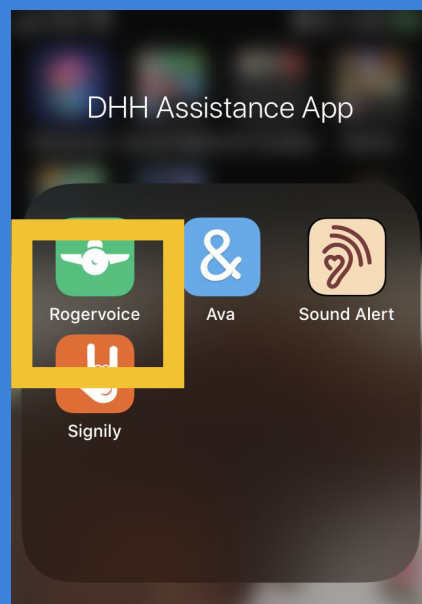


Image created by Sarah Chang: Screenshot showing the app for Rogervoice.

This is available for smartphone users everywhere. When using the app to call a person without the app, there is an option to call someone from your contact list that does not have the app.

You may also dial in a person's number manually, and call the person that way. However, you will need a subscription to call someone without the app. An user can make unlimited calls to someone already using the app, it is all completely free.

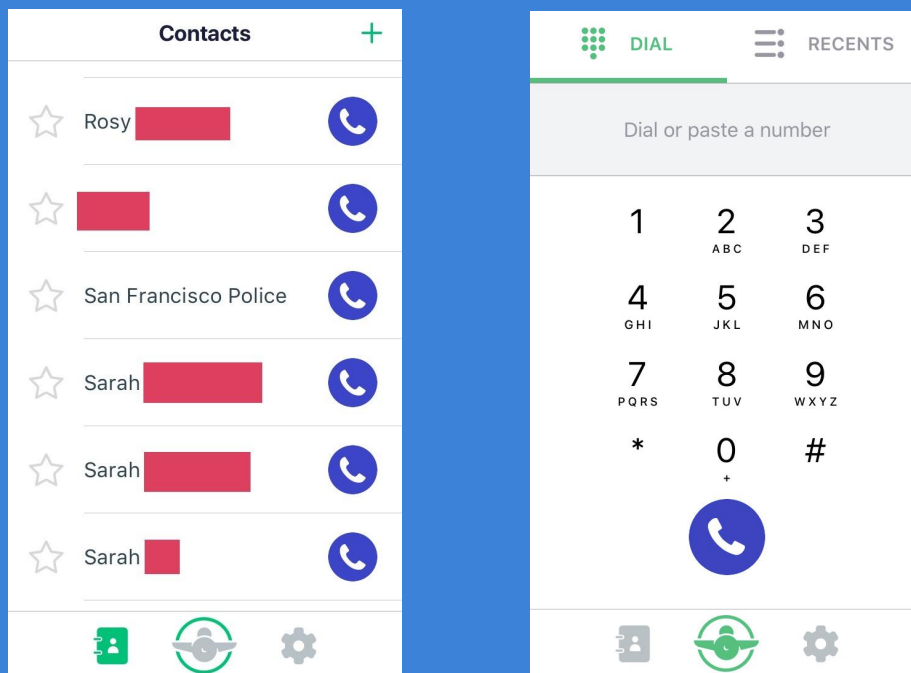


Image created by Sarah Chang: Screenshots of the app Rogervoice showing how to contact other people.

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