

2022

## Elementary Teachers' Preparedness for Deaf and Hard-of-Hearing Inclusion

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# Walden University

College of Education and Human Sciences

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Olga W. Jackson

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Walden University

2022

Abstract

Elementary Teachers' Preparedness for Deaf and Hard-of-Hearing Inclusion

by

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MS, Louisiana State University, 2004

MS, Iowa State University, 1987

BS, Southern University, 1984

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Education

Walden University

May 2022

## Abstract

Once deaf and hearing-impaired students with cochlear implants were exposed to sound, their parents began exploring oral education in the regular classroom setting. Limited research has explored the preparedness of teachers to teach DHH students. The purpose of this basic qualitative study was to explore eight kindergartens through grade 6 (K–6) general education teachers' self-assessed preparedness in professional knowledge, competencies, and skills to teach DHH students in the classroom. The conceptual framework for this study was based on Cogan's trait theory of profession. Research questions focused on how regular education K–6 classroom teachers described the efficacy of their college courses and post college professional development in preparing them to facilitate learning for DHH students enrolled in the regular classroom setting. Data from interviews were hand coded. A line-by-line, inductive approach was used to analyze the data. Five themes emerged from the data related to the two research questions: (a) inclusive classroom, (b) educational challenges, (c) communications challenges, (d) differentiating instruction, and (e) collaboration. Results indicated that the participants were not confident that their teacher education programs, or post college courses effectively prepared them to teach DHH students in a regular classroom setting. The implications for social change included an understanding of the need to increase preparedness for general education teachers to teach DHH students in the classroom.

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## Dedication

I dedicate this achievement first to my sweet mother, who encouraged me throughout this process. I also dedicate this to my husband and daughter, who were very patient during this process. To my sisters and brothers, who believed and prayed for me throughout the process of completing my dissertation.

## Acknowledgments

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## Chapter 1: Introduction to the Study

According to the National Education Association (NEA, 2013), President Lyndon B. Johnson's Elementary and Secondary Education Act (ESEA) of 1965 was revised into the No Child Left Behind Act (NCLB) to ensure academic success for students with disabilities. Additionally, the inclusion of individuals with disabilities into the regular classroom was supported by the Individuals with Disabilities Education Act (IDEA), which promoted the civil rights of students with disabilities in the whole school setting (Kurth et al., 2015). However, for deaf and hard-of-hearing (DHH) students, the inclusive environment has posed many challenges for both the student and the teacher (Bamu et al., 2017; Bruce & Borders, 2015; Constantinescu-Sharpe et al., 2017; Trussell & Easterbrooks, 2017). DHH students and their parents may have expectations based on the belief that full inclusion does not eliminate the individualized educational plan (Bamu et al., 2017). Inclusion involves differentiating instruction for DHH students and adapting curriculum to the individual needs of the student. However, teacher competency may prevent the true meaning of inclusion from being attained (Ayantoye & Luckner, 2016; Guardino, 2015).

### **Background**

The inclusion of DHH students in the classroom with their hearing peers have been a challenging experience for DHH students as well as inclusion teachers (Ayantoye & Luckner, 2016; Bruce & Borders, 2015; Guardino & Cannon, 2015). Other researchers have suggested that regular education teachers do not possess the skills necessary to teach

DHH students in the inclusion classroom setting (Ayantoye & Luckner, 2016; Guardino, 2015; Luckner & Dorn, 2017; Salter et al., 2017). The Council for Exceptional Children (CEC) and Council on Education of the Deaf (CED) reinforced the idea that all teachers who teach DHH students should possess a set of skills and competencies to be highly effective facilitators of learning. A literature search on the preparedness of regular elementary/middle teachers to teach DHH students in the inclusion classroom setting revealed that more research is needed.

Teachers' performances are affected by their knowledge and their perceptions of how a student might obtain the information presented to them. However, many teacher-education programs have not prepared regular education teachers to teach DHH students (Bamu et al., 2017). To add to the complexity of teaching DHH students in the inclusive environment, research has suggested that there is a lack of knowledge on how to teach DHH students (Ayantoye & Luckner, 2016; Cannon et al., 2016; Wendel et al., 2015). This study promoted positive social change because it adds to the body of research on how regular education teachers view their preparedness for educating DHH students in the inclusive classroom. This study was needed because a successful inclusion program for DHH students begins when teachers, special education administrators, and community members have obtained detailed knowledge of the challenges that DHH students may experience in an oral regular classroom setting.

Few studies were found that specifically addressed how regular education teachers are prepared to teach DHH students in the inclusion classroom setting

(Greenfield et al., 2016; Guardino, 2015; Navarro et al., 2016). Some studies related to inclusion and the DHH student have noted that regular education teachers reported the need for more training (Ayantoye & Luckner, 2016; Guardino, 2015; Luckner & Dorn, 2017; Salter et al., 2017). Sibon-Macarro et al. (2014) used a survey to investigate the perspectives of models, services, resources, and challenges of students with hearing impairments. Sibon-Macarro et al. reported that to improve inclusive education for DHH students, special education teachers needed to embrace the vision of inclusion and improve their professional knowledge and skills in that area. A similar study conducted by Ayantoye and Luckner (2016) assessed the perceptions of itinerant teachers who used the inclusion push-in/push-out model for DHH students. In Ayantoye and Luckner's study, itinerant teachers were defined as teachers who are specifically certified to provide educational services to DHH students. Push-in services are provided in the classroom. Push-out services are done with the itinerant teacher outside the classroom. Ayantoye and Luckner concluded that although the current model for inclusion was effective, there was still a need for more professional development for general education teachers. Luckner and Dorn (2017) completed another study related to teachers' perceptions of teaching DHH students. Luckner and Dorn indicated that most teachers were satisfied with their jobs but believed that there was a lack of professional development in deaf education. Researchers have also called for additional research on the topic of professional development training for general education teachers who work with DHH students (Ayantoye & Luckner, 2016; Guardino, 2015; Luckner & Dorn, 2017; Salter et al., 2017).

### **Problem Statement**

IDEA opened the door for students with disabilities to experience every part of their educational journey as students without disabilities do (Jokinen, 2018; Kurth et al., 2015). Additionally, technological advancements in cochlear implants and hearing aids have provided DHH students with better access to sound and the choice of an oral education (Luft, 2017). Instruction for special needs students in the regular classroom environment, known as inclusion, afforded DHH students educational opportunities that opened the door to a world of interests (Carter et al., 2015). Because DHH students addressed the same curriculum as their hearing peers in the inclusion environment, opportunities for learning must be purposely planned and facilitated to promote success (Taub et al., 2017). The problem was that not enough was known about how prepared regular education kindergarten through grade 6 (K–6) teachers are to teach DHH students in an inclusion setting because it is important for the teachers to adequately respond to the inclusion needs of DHH students. This study used K–6 regular education teachers in Louisiana to fill that gap in the literature by providing a better understanding about the preparedness of K–6 regular education teachers to teach DHH students in the inclusion classroom.

### **Purpose of the Study**

The purpose of this basic qualitative study was to explore how eight K–6 regular education teachers self-assessed their preparedness to teach DHH students based on their professional knowledge, competencies, and skills. The inclusion of DHH students in



general education classrooms can present a challenge for both the teacher and the DHH student (Guardino & Cannon, 2015). Therefore, regular education teachers must receive guidance and training on how to address the specific needs of DHH students (Guardino, 2015). Professional training for teachers who teach DHH students will allow them to develop awareness, tolerance, and empathy toward DHH students (Guardino, 2015). Haakma et al. (2016) stated that the quality of a teacher's relationship with the students improves student motivation and educational performance.

### **Research Questions**

- RQ1. How do regular education K–6 classroom teachers describe the efficacy of college courses in preparing them to facilitate learning for DHH students enrolled in a regular classroom setting?
- RQ2. How do regular education K–6 classroom teachers describe the efficacy of postcollege professional development opportunities in preparing them to facilitate learning for DHH students enrolled in a regular classroom setting?

### **Conceptual Framework**

The conceptual framework for this study was based on Cogan's trait theory of profession, developed in 1953, which indicates that developed sets of traits or skills separate professions from one another (Leicht, 2005). Occupations within Cogan's model are guided by eight characteristics that distinguish one profession from another: (a) knowledge based, (b) mastery of skills, (c) relevance to society, (d) service provided to

the profession, (e) performance ability, (f) commitment to job performance, (g) practitioners who enjoy a well-developed community, and (h) a well-developed code of ethics (Leicht, 2005). Traits refer to the expertise, knowledge, and certification of competency that an individual has acquired (Ackroyd, 2016). The trait theory of professions supports the idea that when a regular education teacher possesses the knowledge and skills needed to address the academic and social challenges of DHH students, the teacher's performance level will increase, quality instruction will follow, and collaboration with other teachers and disciplines will require less effort. This study explored Louisiana's regular education K–6 teachers' preparedness to teach DHH students in the inclusive classroom setting in relationship to their professional knowledge, competencies, and skills.

### **Nature of the Study**

This study had a basic qualitative focus. This study was used to explore the professional knowledge, competencies, and skills of eight regular K–6 teachers from the southeastern area of Louisiana regarding teaching DHH students in the regular classroom setting. According to Yin (2015), a basic qualitative approach will provide the researcher with an opportunity to obtain a deeper and more intimate understanding of the participants of a study. This study used a semistructured interview as the data collection source. The semistructured interview collected general information about the participants' professional background acquired through their teacher education programs or postgrad degree professional development in deaf education.

## Definitions

A set of terms was used throughout this research. The purpose of this section is to define these terms for reference.

*Deaf or hard of hearing (DHH):* Federal mandates describe DHH as the inability to gather meaning from auditory stimuli through hearing with or without the aid of amplification (IDEA, 2004). In this research, the term DHH describes students with a wide range of hearing loss (HL) ranging from mild–moderate to severe–profound sensorineural HL.

*Hearing impairment:* An impairment in hearing, whether permanent or fluctuating, that adversely affects a child’s educational performance but that is not included under the definition of deafness in this rule (IDEA, 2004).

*Inclusive education:* The practice of including students with special needs into the general educational setting or regular classes that are in their own neighborhood schools, regardless of any challenges that they may have, to receive high-quality instruction, interventions, and supports that enable them to achieve success in the core curriculum (McManis, 2017).

*Special education:* Specially designed instruction, at no cost to the parents, to meet the unique needs of a child with a disability with instruction taking place in the classroom, home, hospital, or other settings and also including instruction in physical education (IDEA, 2004).

### **Assumptions**

This study was based on three assumptions. The first assumption was that the data collected from this study provided useful information that would inform and improve the competence level of regular education teachers who teach DHH students in the inclusive classroom setting. Second, the participating teachers in this study provided truthful answers to the interview questions connected with this study. Third, the teachers had good recollection about their college experiences.

### **Scope and Delimitations**

The scope of this study included an exploration of the professional competency levels evidenced by the professional knowledge and skills of eight Louisiana certified K–6 regular education teachers regarding teaching DHH students in an inclusive environment. This focus was important because globally there is a growing trend of welcoming and improving education for all students, including those with disabilities (McGhie-Richmond & Haider, 2020). McGhie-Richmond and Haider (2020) stated that inclusion was becoming an international priority because it increases the equity of the school setting. The primary goal of these practices is to provide a rigorous curriculum that prepares all students for the global economy. However, Ayantoye and Luckner's (2016) study reported that more professional development in deaf education was needed for general education teachers. These practices have forced educators to reevaluate and redefine educational pedagogy as well as their professional training related to teaching DHH students. What has contributed to the challenges that DHH students and their

teachers are confronted with in the inclusive setting is that there has been little or no research that has identified information on teacher preparation.

Excluded from this study were certified special education teachers, speech pathologists, and hearing-impaired resource teachers. For the teachers listed above, teacher education programs provide specific coursework that may address challenges and solutions related to teaching DHH students. On the other hand, Guardino's (2015) survey reported that 54% of teachers revealed that their teacher education programs prepared them slightly to not at all to teach DHH students.

### **Limitations**

The first potential barrier to this study was the inability to recruit participants who had taught DHH students. To mitigate this potential barrier, a purposeful sampling was used to include any Louisiana certified K–6 regular education teacher with any degree. Patton (2002) stated that a purposeful sampling provides specific information to the topic at hand. Further, Patton posited that a purposeful sampling exercises logic and power because of the in-depth understanding it offers. Second, the participants of the study were selected from southeastern Louisiana school districts. Finally, the data obtained from the participants of the study were based on the participants' honesty.

### **Significance**

Murphy (2018) stated that the success of inclusion lies within the collaboration of all stakeholders to support students with disabilities. Although IDEA was reauthorized 16 years ago, both teachers and educational leaders emphasized that they lacked the

professional knowledge needed to implement a successful inclusion program (Murphy, 2018; Williams, 2015). More concerning was that Greenfield et al. (2016) believed that attitudes toward inclusion were the result of the length and level of professional training. Therefore, an exploration of the preparedness of regular education teachers began the process of developing regular teacher education programs and in-services or trainings that will allow teachers to acquire the knowledge, competencies, and skills to address the educational needs of DHH students.

This research contributed to the body of knowledge that provides a view of general teacher education programs and their relevance to teaching DHH students in the regular classroom setting. Previous studies indicated that regular education inclusion teachers needed more professional development to improve their job performance (Ayantoye & Luckner, 2016; Guardino, 2015; Luckner & Dorn, 2017; Murphy, 2018; Salter et al., 2017; Williams, 2015). The current study provided a closer look at specific competencies and skills that were present or absent from the regular classroom teacher's knowledge base that are necessary to teach DHH students in the regular classroom setting. This study may fulfill a community need for more information on helping DHH students have a wholistic public school experience.

### **Summary**

The purpose of this basic qualitative study was to explore Louisiana regular education K–6 teachers' preparedness to teach DHH students in the inclusive classroom setting in relationship to their professional knowledge, skills, and competencies. Previous

research suggested that in addition to a strong support system and resources, teachers must have knowledge of DHH students, skills in differentiating instruction, and skills in collaborating among teachers and other professionals (Park et al., 2016). Chapter 2 provides a review of current literature that establishes the relevance of the problem and the conceptual framework for this research.

## Chapter 2: Literature Review

The problem is that little is known about how prepared regular education K–6 teachers are to teach DHH students in the inclusion classroom setting. Darling-Hammond et al. (2005, as in Hennissen, 2017) stated that there is a positive relationship between students' academic achievements and teacher competency. The current practice of the inclusion of DHH students in general education classrooms can present a challenge for both teachers and DHH students (Bruce & Borders, 2015; Constantinescu-Sharpe et al., 2017; Guardino & Cannon, 2015; Trussell & Easterbrooks, 2017). To heighten the tension of educating DHH students in the inclusion setting, parents are under the assumption that inclusion will not eliminate the individualized educational plan (IEP) but will include the adaptation of the curriculum to provide differentiating instruction (Bamu et al., 2017). Therefore, regular education teachers need guidance and training on how to address the specific needs of DHH students (Guardino, 2015). When regular education teachers participate in deaf education professional trainings, they will develop awareness, tolerance, and empathy toward DHH students (Guardino, 2015). The areas explored in this study consisted of the teachers' professional background, professional knowledge, skills, and competencies acquired through teacher education programs or postdegree professional developments in deaf education to understand their preparedness to teach DHH students placed in the inclusive classroom setting.

The major sections of this chapter include the literature research strategies used to obtain studies to establish the research gap that exists related to regular education K–6



teachers' professional knowledge, competencies, and skills to teach DHH students in the inclusive classroom setting effectively. Additionally, the conceptual framework for this study, which was based on Cogan's trait theory of profession, is discussed as it relates to the current study. Finally, an exhaustive review of the current literature related to the key concepts of this study is presented. Specific themes obtained from the literature review include DHH students (types of HL, conductive, sensorineural, mixed, central auditory processing disorder, and otology and neurologic); access to hearing (hearing aids and cochlear implants); inclusive settings (inclusion and academic challenges for DHH students); and the professional knowledge, skills, and competencies needed to teach DHH students.

### **Literature Search Strategy**

The starting point for my literature search was a search of articles within the dates 2015–2020. Searches were completed on the Education Research page of the Walden University online library and Google Scholar. Databases chosen included the following: Academic Search Complete, ERIC, PsycINFO, ProQuest, and SocINDEX. The search terms included the following: *Deaf or DHH or hard-of-hearing, hearing disorders, hearing impairment, inclusive, inclusion, mainstream, classroom teacher, teacher perceptions, teacher beliefs, and teacher attitude*. Individual special education journals were investigated to make up for the lack of current research on teachers' preparation to teach DHH students.

## **Conceptual Framework**

The conceptual framework for this study was based on Cogan's (1953) trait theory of profession, whereby a developed set of traits or skills separates one profession from the next (Leicht, 2005). Developed in the 1950s, the theory indicates that occupations are guided by eight characteristics that distinguish professions from one another: (a) knowledge based, (b) mastery of skills, (c) relevance to society, (d) service provided to the profession, (e) performance ability, (f) commitment to job performance, (g) practitioners who enjoy a well-developed community, and (h) a well-developed code of ethics (Leicht, 2005). Traits refer to the expertise, knowledge, and certification of competency that an individual has acquired (Ackroyd, 2016). The trait theory of professions supports the idea that when a regular education teacher possesses the knowledge and skills needed to address the academic and social challenges of DHH students, the teacher's performance level will increase, quality instruction will follow, and collaboration with other teachers and disciplines will require less effort.

### **Early Theorists**

Early theories of professions were developed by sociologists who attempted to describe what a profession was and how it fit into society (Suddaby & Muzio, 2015). Sociologists initially tried to show that professions were social systems seeking power, but the idea was eventually dismissed because it was not supported with empirical evidence (Suddaby & Muzio, 2015). During the late 1900s, according to Suddaby and Muzio (2015), sociologists' initial theory of professions as social systems seeking power

failed. Their attention shifted to understanding how large corporations compared to large professional organizations, and they began conducting studies on management scholars within the organization. Sociologists later attempted to explain professions with empirical evidence to support characteristics or traits and their functions within society (Suddaby & Muzio, 2015). Many profession theorists were not completely satisfied, thereby giving way to contemporary theorists.

### **Contemporary Theorists**

Contemporary theorists of professions focused on the processes and practices that explained the structure of a profession as it related to the profession's position in social systems (Suddaby & Muzio, 2015). However, questions of power, status quo, and comparison with other professions continued to show up in research. The guiding question in research in trait theory is whether professional values will conflict with authority. Contemporary research on trait theories has shown that professions were able to stay true to individual core values on the job (Suddaby & Muzio, 2015). Additionally, research has indicated that large organizations provide professional trainings for the acquisition and enhancement of skills to promote greater commitment to their profession (Suddaby & Muzio, 2015). The approach that I took in this study involved an analysis of the process and practice of a professional teacher who teaches DHH students in the regular classroom setting.

## **The Professional Teacher**

Like Cogan's trait theory, Tichenor and Tichenor (2005) described a professional teacher as a person who gets paid to teach with competencies in the subject they teach. Competence does have implications for teacher efficacy while teaching, which leads to positive outcomes for students (Haakma et al., 2016). Tichenor and Tichenor used Hugh Socket's theory of moral foundations of teacher professionalism as the basis of their research. Socket identified professionalism as an action performed to demonstrate an occupation, reflecting obligations, skills and knowledge, and ethical relations (Campbell, 1996). Tichenor and Tichenor used this concept to explore what teachers think about effective teaching and professionalism. In a study completed by Lauermann and König (2016), it was suggested that teachers' professional competence is related to teachers' cognition (professional knowledge), belief about learning, and self-motivation. Lauermann and König's framework for their study was related to Albert Bandura's self-efficacy theory, which was developed in 1994 to show that teachers' professional competencies were related to professional wellbeing and success.

The demands involved in teaching DHH students in the regular classroom setting were challenging (Guardino & Cannon, 2015). Darling-Hammond et al. (2017, as cited in Hennissen et al., 2017) suggested that there are doubts about whether teacher education programs are producing high-quality professional teachers. Korthagen (2001, as cited in Hennissen et al., 2017) stated that the professional behavior and the effectiveness of general education teachers are disappointing. Many states have developed professional

teaching standards or teacher competencies to assess the knowledge and skills needed in the profession of teaching (Masters & Freak, 2015). In addition, Masters and Freak (2015) stated that the profession in education boils down to two actions: teachers teaching and learners learning. In relation to the profession of teaching DHH students in the regular or special classroom, the CEC listed specific professional skills to promote highly effective teachers and successful inclusion practices.

No research could be found that examined professional teachers' competencies for teaching DHH students in the inclusive classroom setting. The trait theory of professions supports the idea that when a regular education teacher possesses the knowledge and skills needed to address the educational challenges faced by DHH students, the students' performance levels will increase, quality instruction will follow, and collaboration with other teachers and disciplines will require less effort. Professional teachers accept the responsibility of meeting the needs of their students and are aware of the standards needed to teach in their specific content area (Tichenor & Tichenor, 2005).

### **Literature Review**

The purpose of this basic qualitative study was to explore Louisiana's regular education K–6 teachers' preparedness to teach DHH students in the inclusive classroom setting in relationship to their professional knowledge, competencies, and skills. This literature review includes constructs of interest related to the current research project. Topics and subtopics include DHH students (types of HL, conductive, sensorineural, mixed, central auditory processing disorder, and otology and neurologic); access to

hearing (hearing aids and cochlear implants); and inclusive settings (inclusion and academic challenges for the DHH student). Finally, I look at what research says about regular K–6 teachers' professional knowledge, skills, and competencies needed to teach DHH students.

### **Deaf and Hard-of-Hearing Students**

When confronted with the educational challenges that DHH students may experience, regular educators must reevaluate and redefine educational pedagogy as well as their professional trainings for teaching these students. Wanis (2018) completed a study that explored the knowledge, training, and experiences of special education directors related to DHH learners. Wanis stated that administrators should be aware of the needs and challenges of DHH students and the supports that teacher need to be successful. Guardino's (2015) research was like the current study in that she evaluated teachers' preparedness to work with students who are deaf and hard of hearing with disabilities. The results of the survey presented in Guardino's study were compared to the Council on Education of the Deaf Standards for teachers of the deaf to determine the needs of teachers and service providers working with DHH students. A specific search for information on the preparedness of regular inclusion teachers who work with students who are deaf and hard of hearing revealed a lack of updated literature in this area of study. Thus, the lack of current literature leads to the conclusion that the current research is needed. An understanding of the types of HL is the first step to helping teachers understand the educational challenges and needs of DHH students.

IDEA's (2004) description of DHH is the inability to gather meaning from auditory stimuli through hearing with or without the aid of amplification. According to IDEA, the term DHH describes students with a wide range of HL ranging from mild-moderate to severe-profound sensorineural HL. For the current research, I adopted IDEA's definition of DHH. Each type of HL places children at risk of academic, language, and psychosocial difficulties that could affect their overall educational career. Using a mixed-methods approach, Norman and Jamieson (2015) surveyed 53 itinerant teachers of DHH students to obtain information about their commitment to ongoing professional development and perceptions of social and emotional learning attitudes, beliefs, and practices. Norman and Jamieson's findings indicated that DHH students sometimes experienced feelings of loneliness, embarrassment, annoyance, confusion, and helplessness, which created psychosocial problems and could affect the students' interaction with their peers. The itinerant teachers believed that they were ill prepared and had a lack of school resources to support the students in this area. There are four types of HL: conductive, sensorineural, mixed, and central auditory processing disorder (American Speech-Language-Hearing Association [ASHA], n.d.).

### ***Conductive Hearing Loss***

Conductive HL occurs in the middle and outer ear and is the result of infections or abnormal ear structure. According to ASHA (n.d.), conductive HL can be fluctuating, permanent, or temporary. Whatever the case, difficulties in areas such as auditory reception, speech, adverse listening, localizing sounds, and understanding speech and

overall listening skills are common to children with conductive HL. In addition, common to school-aged children with this type of HL is difficulty with verb tenses, phonemic awareness skills, receptive and expressive skills, and delayed articulation skills. ASHA also reported that children with conductive HL will most often score lower than hearing peers on achievement and verbal IQ testing. The implications of the listed complications associated with conductive HL make it clear that academic difficulties in reading and spelling are unalterable if there is no medical consultation and monitoring (ASHA, n.d.).

### ***Sensorineural Hearing Loss***

A sensorineural HL is a dysfunction of the nerve connection between the inner ear and the brain (ASHA, 2016). Incidents that result in sensorineural HL include meningitis, lack of protection of ears from noise, and birthing difficulties. This type of HL can be in one ear (unilateral) or in both ears (bilateral). Similarly to conductive HL, children with sensorineural HL display receptive and expressive language difficulties, speech perception and production difficulties, and speech and auditory discrimination difficulties. ASHA (2016) also noted that problems with language concepts such as syntax, semantics, and vocabulary development are most common to this group of individuals. As a result, hearing-impaired students', academic achievements in language arts, vocabulary development, reading, spelling, arithmetic, and problem solving may lag behind their hearing peers. Moreover, ASHA predicted that the need for special education services for children with sensorineural HL because of high rates of grade repetition and academic failure. It is noteworthy that information obtained from ASHA's Practice Portal



is developed through a comprehensive process involving inputs and reviews from experts related to the subject matter at hand (ASHA, n.d.).

### ***Mixed Hearing Loss***

A third type of HL is a mixed HL, which is a combination of conductive and sensorineural HL. According to ASHA (2016), mixed HL can be mild or moderate in one or both ears and may involve audiologic, communication, and academic difficulties that exist with conductive and sensorineural HL. As a result, there may be an increased need for special education or classroom support. Halliday et al.'s (2017) study of 46 children aged 8-16 years examined how language development is impacted in children with mild to moderate HL. Halliday et al. concluded that children with mild to moderate HL have significantly poorer expressive vocabulary, receptive grammar, recall of sentences, and nonword repetition than their peers.

### ***Central Auditory Processing Disorder***

A final type of HL is a central auditory processing disorder caused by a disorder of the central auditory nervous system (ASHA, n.d.). Although HL may not be present, children with central auditory processing disorder have hearing sensitivity and behave as though they have HL. A central auditory processing disorder is known to manifest as poor organizational skills and poor singing and music skills. In addition, children with central auditory processing disorders have difficulty following multistep processes, have delayed fine and gross motor skills, and have low verbal IQ skills. ASHA pointed out that

children with central auditory processing disorder exhibit frequent chronic ear infections and other otology and neurologic problems.

### ***Otology and Neurologic Hearing Loss***

Hearing Impairment (HI) can be caused by various genetic, environmental, and/or unknown factors (Hotchkiss et al., 2019). Hotchkiss et al. study on HI oncology report was completed to allow researchers to view an illustration how adaptable the Sickle Cell Disease Ontology (SCDO) model can be to the ontology of any disease. The researchers concluded that HI can be associated with many pathologies with some associated with syndromes and others are not (Hotchkiss et al., 2019). Either way, knowledge of specific diseases associated with HI is not thoroughly understood. However, using the SCDO model, the oncology of HI is part of 4 main subclasses: Hearing Impairment by cause, Hearing Impairment by Ear Affected, Hearing Impairment by Onset, Hearing Impairment by Physiopathology Mechanisms, and newly added using the SCDO model is the Disease Attribute. Disease Attribute will introduce diseases of the nerves and nervous system that may cause HI. Hotchkiss et al. presented the Disease Attribute to include Unknown Etiology with subclasses called Environmental Disease Cause class and Intrinsic Disease Cause class. These subclasses provide a better understanding of diseases related to HI. Furthermore, the additional information on hearing impairment oncology contributes to the HI oncology database for public and clinical management (Hotchkiss et al., 2019). Managing an individual's access to sound begins with and understanding of hearing impairment oncology.

## **Access to Sound**

Improved technological advances of hearing aids (HA) and the development of cochlear implants have provided greater benefits in improving speech recognition and noise reduction. DHH children enter a world where access to sound is uncertain. In Holt's (2019) review of assistive hearing technology for DHH, it was reported that technology for hearing aids have come from analog linear hearing aids to hearing aid that are the same size as the ears (Holt, 2019). Hall et al. (2019) study on how using sign language improves language skills suggested that when DHH students have delayed language it's the result of a lack of access to their first language. For some DHH children, the cochlear implant is received in infancy or as a toddler (Hall et al., 2019). The HA and the CI are used mostly in schools by DHH children (Holt, 2019).

### ***Hearing Aid***

A HA is an amplification device that has given DHH children access to sound (ASHA, 2016). HA are selected based upon the benefits obtained by the child. Reports indicated that the digital hearing aid has the capabilities to provide directional microphones that help in hard to hear environments. They can be worn behind-the-ear (BTE), in-the-ear (ITE), or in-the-canal (ITC). HAs are determined by the needs and demands of the individual (NIDCD, 2017). Hearing aids amplify and transmit sound to the ear (Holt, 2019). Furthermore, Holt reported that developing audibility is the first step to developing language for DHH students. However, when the use of the HI does not prove to be the best means to access sound, some parents turn to the CI.

### ***Cochlear Implant***

Surgically implanted on the brain, the cochlear implant (CI) replaces a damaged or non-functioning cochlear (ASHA, 2016). In the human body, the cochlear receives information about sound, generated by cochlear nerve hairs in the ears (Lieberman & Kujawa, 2017). If the cochlear is damaged, a HL will occur in the ear. The CI is a prosthesis designed to provide direct electrical stimulation to the auditory portion of the brain. Candidates for a CI must have a profound bilaterally HL with a minimum age of two. However, medically necessary implants can occur at twelve months or earlier. (Jackson et al., 2015). Across the United States, CI are increasingly being used (National Institutes on Deafness and Other Communication Disorders (NIDCD), 2017). Holt's (2019) review of assistive technology for DHH reported that the cochlear implant is used by children with sensorineural HL (severe-to-profound in degree), and when the HA has not proven successful.

Over the years, there have been many changes to services provided to individuals with disabilities as the result of many federal mandates. IDEA mandated free and appropriate public education (FAPE) and placement in the least restrictive environment (LRE) for disabled individuals ages 0-21 or graduation (ADA National Network). The ADA includes early intervention services for 0-3 population as a provision covered under FAPE. For DHH children, early identification followed with a bombardment of early intervention services. Dettman et al.'s (2016) study of 403 under 6-year-old children who received cochlear implants showed improvements in their overall language skills.

Freeman et al. 's (2017) study of 51 school-age children with CI revealed that speech intelligibility was better than those who used sign language. Furthermore, Freeman et al. also stated that teachers assume that DHH students have normal speech production and listening comprehension skills. Similarly, Davenport and Alber-Morgan's (2016) research on preschool children with cochlear implants in the regular classroom stated that a hearing teacher may assume that the child with a cochlear implant may have no difficulty listening and learning auditorily at all. Also, Davenport and Alber-Morgan concluded that children with a cochlear implant(s), regardless of the perceptions of their regular education, need support from the IEP team if placed in a regular classroom setting. Holt (2019) stated that access to spoken language is the goal of assistive hearing technology but with the cochlear implant spoken language does not occur automatically instead much aural therapy is needed. Even with assistive technology for DHH students, much is needed to be considered for success in the inclusive classroom setting.

### **Inclusive Settings**

The inclusive setting idea stems from the concept of the LRE which manifested with the reauthorization of the IDEA (Ayantoye & Luckner, 2016). Ayantoye and Luckner (2016) stated in their qualitative study with four DHH high school students that the LRE concept is a push to educate students in special education with non-handicapped students. Within the inclusive setting, there should be adjustments in the environment and instructional presentations that accommodate the needs of the special education student. Kurth et al. (2015) concluded in their qualitative study of 18 severely disabled students

that even students with severe disabilities can successfully acquire academic, communication, social, and self-determination skills in the inclusive settings. Whitley et al. (2019) reported in their mixed methods study of 4,875 teachers that some teachers believed that differentiating instruction for special needs students produced positive outcomes. In contrast, still there were teachers who were confused about whether differentiated instruction compromised the rigor of academics (Whitley et al., 2019). Greenfield et al. (2016) reported that in their mixed methods study of 15 LD methods course participants when teachers possess the knowledge and skills needed to teach special needs students in their classroom and can collaborate with special education teachers and others, positive outcomes will occur. Scruggs and Mastropieri (2017) in their quantitative study of 400 co-taught classroom stated that when the regular educators and special educators can effectively communicate their planning and instructional goals for students in the inclusion setting, a more positive outcome will proceed for students. Inclusion for DHH students has its own challenges related to academics and communication skills.

### ***Inclusion and DHH Students***

Luft's (2017) quantitative research of the education and disability services concluded that deaf education is different from regular education because of the varying differences possessed by the DHH student. According to Johnson (2017), from her qualitative study of two approaches to teaching DHH students, there was an increase of DHH students being educated in the regular classroom. However, there was limited

amount of research in this area to verify that the professional trainings of regular education teachers are enough to provide quality and effective instruction for DHH students. In a qualitative study of 13 participants, it was found that the identification of educational strategies beneficial for DHH students have been an on-going challenge for both parents and educators (Robertson & Shaw, 2015). Johnson also stated that all instruction, educational strategies, decisions, and services should be guided by an IEP. Despite the educational difficulties or challenges DHH students may face, the provisions afforded by accommodations help to remove barriers that prevent them from reaching their fullest potentials. Cawthon et al. (2015) stated in their longitudinal study of 11,000 students that the use of technology had a positive effect on students with learning disabilities as well as students who were DHH. Some commonly used technology interventions focused on improving verbal and visual information, motivation, reading, math, and lecture comprehension, vocabulary skills, English morphosyntax, thinking skills writing improvement, and speech production (Cawthon et al., 2015; Thoren et al., 2015). However, knowledge of technology interventions should be a part of teacher strategies presented in teacher in-services for DHH students. Finally, Morningstar et al. (2016) stated in their qualitative study of an Inclusive Education Workgroup that to provide the necessary support for inclusion practices, there should be more studies to examine the dispositions, knowledge, and skills of educators.

### *Academic Challenges*

There are many conflicting views of how DHH students are performing in the regular classroom and what must be done for successful learning to occur. Researchers stated that even with new legislature and other educational developments, DHH students' academic achievements continue to be inferior to their hearing peers (Cawthon, 2015; Maiorana-Basas, 2018). Easterbrooks et al.'s (2015) quantitative study of 351 DHH students found that hearing students and DHH students learn to read differently therefore the approach to teaching reading should change. Trussell and Easterbrook's (2017) systematic review of 13 studies provided data that supported the need for DHH to have specific instruction in morphology. Andrew et al. (2016) conducted a similar study of two approaches to teaching reading and concluded that instruction using a visual language to understanding phonology has proven successful for DHH students when learning to read. In LaSasso and Crain's (2015) study of the reading process as qualitative or quantitative, the researchers concluded that the process of learning to read has nothing to do with a HL but with the questions the reader may ask. LaSasso and Crain also believed that deaf students can develop phonology skills with traditional instructional materials and learn to read at the same rate as their hearing peers due to the existence of a biological predisposition to acquire natural language present in all children. Curtis et al.'s (2019) quantitative study of 97 children concluded that difficulties in reading may be the result of unresolved early language delays.



### *Communication Skills*

After early interventions during the preschool years, research showed that the oral communication skills of DHH toddlers improved (Curtis et al., 2019; Roberts & Kaiser, 2015; Yoshinaga-Itano et al., 2017). As a result, more and more DHH students were enrolling in public schools each year as reported by a mixed methods longitudinal study of 197 DHH students (Antia & Rivera, 2016). However, Marschark et al. (2015) asserted, from their qualitative study of 500 DHH students, that many DHH students enter school neither fluent in signed or spoken language. Becker and Bowen's (2018) qualitative study of 8 service providers labeled many DHH students enrolled in public schools as English learners. Luft (2017) posited that DHH students lack the necessary stimulus needed for language development. Significant delays in the acquisition of language skills are the result of the lack of language stimulus received during the early ages (Luft, 2017). Similarly, Marschark et al. stated that DHH students may experience communication barriers in the general classroom. Marschark et al. also hold the position that many service providers find it difficult to create enriched language environments conducive to language learning. Therefore, continuous support in the areas of receptive and expressive language may narrow the achievement gap that exists between DHH children and their hearing peers (Luft, 2017). Yoshinaga-Itano et al.'s (2017) cross sectional quantitative study of 448 children with bilateral HL determined that language acquisition for students with HL is greatly improved when they have early hearing detection screenings, and intervention resulting in vocabulary learning. However, the

unique communication, academic and cultural needs characteristics of DHH students present challenges which require specific competencies and skills needed to teach DHH students (Becker & Bowen, 2018).

### **Competencies/Skills Needed to Teach Deaf and Hard-of-Hearing Students**

Researchers have presented information on teachers' strategies, teachers' attitudes, professional development, principals' attitudes, and on the characteristics of what highly effective inclusion programs should look like (Brock et al., 2016; Kurth et al., 2015; Murphy, 2018; Salter et al., 2017). One study involved the collaborative working practices for the inclusive mainstreamed setting for deaf education as seen in the eyes of teaching assistants (Salter et al., 2017). Salter et al.'s (2017) qualitative study of 25 participants explored the assistants' role but did not address prior trainings or professional developments. Luft (2017) studied DHH students along with teacher practices and the students' family dynamics. Luft concluded that for successful educational experiences, DHH students need to learn both receptive and auditory language development strategies to improve or increase their current language and cognitive skills. Masters and Freak's (2015) qualitative study of the framework for teacher formation concluded that in many countries, including the United States, teacher education programs are regulated by a set of national teaching standards to describe quality teachers.

Guardino (2015) stated that the Council on Education of the Deaf (CED) proposes a set of standards and competencies required to teach students who are DHH. The CED is

dedicated to ensuring that DHH students are provided with quality education. The CED described the knowledge and skills teachers should possess to teach DHH students in all educational settings. Also, the CED standards provided guidelines to accredit university teaching programs for DHH. Likewise, the CEC supported the idea that Initial Preparation Standards for all professionals in special education are needed. These include knowledge and skills necessary to teach DHH students (CEC, 2018). Guardino proposed that all teacher preparation programs for DHH students use the CEC standards as its guide.

***Initial Preparation Standard 1: Learner Development and Individual Learner***

Mitchiner and Lytle (2018), codirectors of the DHH Infants, Toddlers, and their Families Interdisciplinary Graduate Certificate program at Gallaudet University, stated that when parents discover that their child is DHH, they experience grief and anxiety but shortly begin to learn as much as they can about what it means to be DHH. And so, it should be with the teacher who has the responsibility to teach DHH students. Dorn (2018) stated in her quantitative study of 365 itinerant teachers that general education teachers are not knowledgeable of the challenges of being a DHH student. The CEC (2018) listed as the first initial standard the acquisition of knowledge about the DHH cognitive and language development, the relationship between the students' onset HL, age of identification, and previous services provided to the student prior to entering school. In addition, standard 1 noted that the DHH teacher should know the relationship between the student's experiences, educational placement, cultural identity, and language

for all developmental domains. The Initial Preparation Standard suggests that the teacher study linguistic and non-linguistic components of being DHH. Also, the CEC stresses the importance of skills in early intervention for language development. Bruce and Broders's (2015) qualitative research of 3 areas of deafness with a disability suggested that in the inclusion classroom, the language abilities of hard-of-hearing students are most likely misunderstood by teachers more than those students with interpreters because they use oral language. Furthermore, some general education teachers assume that DHH students with English as their oral language have language skills conferrable to their peers.

***Initial Preparation Standard 2: Learning Environments***

With the 1975 passing of Public Law 94-142, a shift occurred in the educational settings of DHH students (Gettemeier, 2017). The re-authorization of IDEA allows parents of DHH students to participate in the placement of students in LRE with their non-disabled peers based on the student's individual needs (IDEA, 2004). Gettemeier (2017) stated that placing the DHH student into the regular classroom may not be appropriate. The CEC's Initial Preparation Standard 2 emphasizes that teachers of DHH students have knowledge and skills related to the creating a learning environment conducive for learning. A teacher must possess knowledge of family and cultural communication. Also, skills are needed to provide ongoing opportunities and interaction with peers and role models for DHH students, preparing DHH students in the use of interpreters, managing assistive technology, and designing the classroom as to capitalize on both visual and auditory learning.

***Initial Preparation Standard 3: Curricular Content Knowledge***

Research suggests that there is a lack of knowledge on how to teach DHH students (Ayantoye & Luckner, 2016; Cannon et al., 2016; Wendel et al., 2015). To promote growth in this area, the CEC's initial preparation standard 3 asserts that teachers who teach DHH students need skills in planning and implementing transitions across service continuums. In addition, the teacher should have the ability to integrate language instruction into academic areas. Dorn (2018) stated that the teacher should make language deliberate. Pimperton et al. 's (2017) quantitative study of 60 DHH students and 38 normal hearing students proposed that even DHH students who were identified early with access to spoken language may have receptive and expressive language delays.

***Initial Preparation Standard 4: Assessment***

Marschark et al. (2015) reported that the academic achievement of DHH is interwind with many different factors. These factors are not limited but may include a student's hearing threshold, language fluencies, mode of communication, and communication functioning (Marschark et al., 2015). Marschark et al. suggested that the DHH student with better spoken language and regular attendance to secondary schools were factors that had positive outcomes on the students' test scores. The National Association of the Deaf advocates that it is important that professionals are knowledgeable about the evaluation team's language acquisition for DHH students during the evaluation (National Association of the Deaf, 2016). IDEA (2004) states that a variety of tools should be used to evaluate the functional, developmental, and academic

informational about the DHH student. Greene-Woods and Delgado's (2017) case study of 1 DHH student asserted that choosing the correct technology language and placement for evaluation procedures necessary for DHH students require the expertise of trained certified professionals.

***Initial Preparation Standard 5: Instructional Planning and Strategies***

Taub et al.'s (2017) study of three curricula presented to DHH students in the inclusion environment stated that since DHH students addressed the same curriculum as their hearing peers, teachers should plan and facilitate learning opportunities that promote success. Morningstar et al.'s (2015) descriptive study of six schools examined inclusive classrooms that demonstrated schoolwide inclusive policies and practices that were successful. Morningstar et al. found that in the inclusive classroom the students were impacted by the supports they received in the inclusive environment and the supports they received to become engaged in learning Universal Design for Learning (UDL), interventions, individualized accommodations, and modifications). Dack's (2017) qualitative study of 24 graduate level students indicated that the fidelity of implementing differentiated instruction is developed over time only after experience in a teacher education coursework. The participants in Dack's study concluded that teacher candidates' learning experiences in the differentiated instruction coursework provided a better understanding of the pedagogical tools (activities, teaching strategies, resources, and assessments) useful to achieve the goals of providing differentiated instruction when needed. Guardino (2015) concluded that most teacher preparation programs teach

instructional strategies to use when teaching DHH students even when there is not an additional disability. However, Guardino's study evaluated teachers' preparedness of DHH students with disabilities and found that 91% of teachers believed that they needed more training related to accommodations. Also, less than 50% stated that they used specific strategies or interventions for their students who had additional disabilities such as autism, visual impairment, emotional disturbed, intellectual disabilities, or attention deficit disorder.

***Initial Preparation Standard 6: Professional Learning and Ethical Practice***

Standard 6 states that a teacher of the DHH should participate in professional learning and ethical practice. This standard encourages teachers to seek to enhance the professional practice by participating in ongoing professional learning. Standard 6 stated that the teacher of DHH students should know the roles and responsibilities of teachers and the educational practices assigned to the teacher. Wanis's (2018) study of 121 special education administrators indicated that school administrators themselves lack the knowledge and training needed to manage or lead special education programs involving DHH students. Like the current study, Wanis explored the knowledge, skills, and experiences of special education leaders who supervised teachers responsible for the education of DHH students. The results of the study indicated that special education leaders are not adequately trained in special education. The implications of the study were that effective leaders should have knowledge of the diversity of students and their individual differences to provide support to the educational staff. Initial Preparation

Standard 6 advocates that professional learning and ethical practice include knowledge in model programs for DHH, teacher responsibilities, available professional resources, incidences, and prevalence of DHH individuals related to the sociocultural, historical, and political forces, and the causes of HL (CEC, 2018). Also, the suggested skills include: (1) the ability to communicate in the DHH students' mode of communication, (2) possess a lifelong commitment to maintain and improve their language competence, (3) explain and research the basis for which DHH teaching practices were established, and (4) the ability to develop and support programs that enrich the DHH community. Finally, much collaboration from a variety of disciplines is an integral part of teaching DHH students.

***Initial Preparation Standard 7: Collaboration***

Archibald (2017) defined collaboration as the act of working together to achieve shared and common goals to children with communication impairments. Kinsella-Meier and Gala (2016) stated that collaboration is very difficult but essential among teachers of DHH students when individuals work to achieve the same goals. Furthermore, Kinsella-Meier and Gala's research into the collaboration partnership between DHH students' parents and teachers argues that collaboration involves a willingness to compromise and involvement in a dependent partnership in hopes of achieving a bigger goal. Wilson et al.'s (2015) qualitative study of 58 primary teacher and 37 speech language therapists found that the group of professionals did not have any idea of what each other did. Therefore, the group could not have a collaborative relationship because there could not be shared knowledge, perceptions, and attitudes. In a follow-up qualitative study of a 3-



hour professional education program for prospective teachers and speech pathologists, Wilson et al. (2016) wanted to ensure that teachers and speech and language pathology graduates were prepared to collaborate with each other when working with diverse language literacy learners by combining learning opportunities. Wilson et al. found that the collaboration opportunities of the graduates increased their linguistic/curriculum knowledge and their case-based instructional planning for students. Miller et al.'s (2018) evaluation of an educator Interprofessional IEP Program stated that goal-oriented collaboration places emphasis on the student's needs thereby creating improvements in students' behavior, academic achievement, attendance, graduation rates, and increases post-graduation experiences. Miller et al. posited that collaboration between teachers and family develops a partnership with the school. Also, Miller et al. reported that many teachers are ill-trained or have limited knowledge on how to develop school partnership through collaboration. The authors reported that there are not many professional workshops available for teachers on establishing school partnerships with parents. Ronfeldt et al.'s (2015) quantitative study of 336 schools and 9,000 teachers indicated that both student achievement and teacher quality improved when teacher and schools engaged in collaboration.

### **Summary**

The purpose of this basic qualitative study is to explore regular education K-6 teachers' preparedness to teach DHH students in the inclusive classroom setting in relationship to their professional knowledge, competencies, and skills. The exploration of

literature related to the purpose of this study have yielded much information related to the educational demands placed on DHH students and teachers in the inclusive classroom setting. One theme from the literature reviewed in Chapter 2 included a look at the variations of hearing impairment and its implications. The inclusive classroom setting and what it means for teacher preparedness and DHH student placements, educational challenges, and communication skills were included in the literature review. Finally, the literature review highlighted a list of teacher's professional knowledge, competencies, and skills needed to teach DHH students which was proposed by the CEC as it related to the current study.

Current research could not be found that examined the regular education teachers' preparedness for teaching DHH students in the inclusive classroom setting. In relation to The Cogan's trait theory of professions, the foundation for the idea that when a regular education teacher possessed the knowledge, competencies, and skills needed to address the educational challenges faced by DHH students, the students' performance levels will increase, quality instruction will follow, and collaboration with other teachers and disciplines will require less effort. The CEC provided standards for the professional teacher who teaches DHH students. Of great importance is the professional teachers' acceptance of the responsibility of meeting the needs of their students and their awareness of the standards needed to teach in their specific content area (Tichenor & Tichenor, 2005). However, the prevailing theme in this literature review is that more

research is needed to begin to address the preparedness of regular education teachers' preparedness to teach DHH students enrolled in the inclusion classroom setting.

In Chapter 2, I indicated the need for more studies to determine the efficacy of general education preparedness to teach students who are DHH. Chapter 3 of this study will outline the research design and rationale for the current study. The role of the researcher and the methodology and data analysis plan will be discussed. Of equal importance, chapter 3 will include a discussion of issues of trustworthiness related to the study.

### Chapter 3: Research Method

The purpose of this basic qualitative study was to explore regular education K–6 teachers' preparedness to teach DHH students in the inclusive classroom setting in relationship to their professional knowledge, competencies, and skills. Exploring the teachers' background knowledge obtained from college courses, professional development courses, and post certification courses helps in understanding their preparedness to teach DHH students placed in the inclusive classroom setting. The current study fills a gap in the literature and research. This may enable administrators and educators to recognize the educational challenges that DHH students experience in the inclusion classroom setting. This research could promote positive social change by helping administrators and teachers (a) identify the challenges that they may experience when confronted with teaching DHH students in the inclusive classroom setting and (b) seek opportunities to improve their professional knowledge and skills to develop a more effective DHH inclusion program.

According to Merriam and Tisdell (2016), qualitative research allows a researcher to gain firsthand knowledge about the subject at hand. In this study, a basic qualitative design was used to find the answers to two research questions. Chapter 3 includes a section on the research design and rationale, in which I discuss why a qualitative design was appropriate for this study. In this chapter, the role of the researcher and the strategies used to eliminate bias and other challenges are also discussed. Additionally, this chapter

provides a description of the data analysis plan, issues of trustworthiness, and the procedures used to ensure that ethical issues were handled properly.

### **Research Design and Rationale**

To understand the preparedness of teachers to teach DHH students in the inclusive classroom setting, two research questions were at the center of this research. I sought to address the following research questions:

- RQ1. How do K– 6 grade regular education classroom teachers describe the efficacy of college courses in preparing them to facilitate learning for DHH students enrolled in a regular classroom setting?
- RQ2. How do K– 6 grade regular education classroom teachers describe the efficacy of postcollege professional development opportunities in preparing them to facilitate learning for DHH students enrolled in a regular classroom setting?

A qualitative method was chosen because the issues of teachers' preparedness require an in-depth and detailed understanding (Patton, 2002). A quantitative method was not suitable for this study because standardized measures would not be used with predetermined response categories to describe the participants' experiences or perspectives as described by Patton (2002). Choosing a qualitative method allowed for unconstrained analysis of the data provided during the qualitative inquiry.

The central focus of this research was understanding the professional knowledge, skills, and competencies possessed by regular education K–6 grade teachers in

relationship to their preparedness to teach DHH students in the inclusive classroom setting. Cogan's trait theory of professions was the conceptual framework for this study. The underlying concept of the trait theory of professions is that occupations are separated by a set of traits or skills (Ackroyd, 2016). Supporting Cogan's trait theory of profession, this research used the CEC's guidelines of professional knowledge, competencies, and skills needed to teach DHH students to answer the research questions for this study. DHH students are those students identified through special education guidelines as having a wide range of HL ranging from mild–moderate to severe–profound sensorineural HL with or without any type of amplification.

Creswell (2013) stated that qualitative research provides a detailed understanding of an issue that requires directly talking with people. I knew little about the preparedness of regular education teachers who teach DHH students in the inclusion classroom setting. Using open-ended interview questions, I collected information about the participants' professional knowledge, skills, and competencies. Therefore, the setting and the participants were appropriate for this study.

### **Role of the Researcher**

Merriam and Tisdell (2016) stated that in a qualitative study, the focus is on the process, meaning, and understanding, which makes the researcher the primary instrument of data collection and analysis. Creswell (2013) stated that a qualitative researcher must have a strong commitment to studying a problem and must meet associated demands for time and resources. In this study, I gathered up-close information from the participants by

talking directly with them. It was my role as the researcher to conduct the research process, including the interviews. I collected, analyzed, and summarized the data, serving as the key data collection instrument. I organized the data into categories or themes for interpretation. My key focus as the researcher was to learn of the participants' professional knowledge, skills, and competencies as they related to teaching DHH students in the inclusive classroom setting. I engaged in this study to obtain this information from the participants using best research practices.

### **Methodology**

The basic qualitative methodology that was used provided the data needed to answer the research questions. Patton (2015) stated that qualitative inquiry lends itself to collecting data from in-depth interviews, focus groups, open-ended questions on surveys, postings on social media, direct observations in the field, and analysis of documents. For the purpose of this study, the data were collected using semistructured interviews. The methodology section presents the participant selection logic and recruitment procedures, instrumentation, procedures for data collection, and data analysis plan.

### **Participant Selection Logic**

The purpose of this basic qualitative study was to explore regular education K–6 teachers' preparedness to teach DHH students in the inclusive classroom setting in relationship to their professional knowledge, competencies, and skills. Because this research involved a qualitative design, a purposeful sampling was used. Patton (2002) stated that a purposeful sampling will add illumination to the answers to the research

questions in this study. I determined that a purposeful sampling of 8 participants should allow for saturation of information related to everyone's teacher education program and/or in-services important to this study. Further, a purposeful sampling of 8 participants increase the strength of the information from this in-depth study (Patton, 2015). Baker and Edwards (2012) stated that a small number of subjects can be valuable for studying a hard population to access. Because DHH is a low-incidence disability, it might have been difficult to access regular education teachers who had taught DHH students in the inclusive classroom (ASHA, n.d.). Therefore, because the purpose of the study was to explore the preparedness of regular education teachers to teach DHH students in the inclusion setting based on their professional knowledge, competencies, and skills, it was not a requirement for participating teachers to have already taught a DHH student or have a degree in education. Therefore, the participants for this study had to be regular education K– 6 grade teachers who were certified to teach in Louisiana. Finally, Mason (2010) stated that the sampling size for a qualitative study can be 10 or 50; however, it is the quality of the data obtained from the interaction between the interviewer and the participant that determines if saturation has been achieved.

A participant's invitation form was posted on social media groups (Facebook, Instagram, and LinkedIn). The participant's invitation asked potential participants to respond by email within 5 days if they were interested. The participant's invitation contained my research questions, and contact information. Once eligibility to participate



was established, the interested participants were sent an informed consent form by email through DocuSign addressing the following:

- the background of the study,
- participant involvement in the procedures of the study,
- the voluntary nature of the study,
- eligibility to participate,
- the risks and benefits of the study,
- payment for participation,
- the privacy commitment,
- my contact information for questions, and
- a request for a signature.

### **Instrumentation**

Eight semi structured interview questions (see Appendix) were used in this study to collect data. The interview provided information about the participants' preparedness to teach DHH students in relationship to their professional knowledge, skills, and competencies. A practice version of the interview questions was completed and evaluated for clarity and function as it related to the research questions. The interview was selected as the key instrument for collecting the data for this study.

### **Researcher-Developed Instrument**

The research questions were developed using Wanis's (2018) qualitative study of 120 DHH special education administrators as a reference as to what type of questions

would provide the most information to answer the research questions. In addition, to determine what knowledge, skills, and competencies were important for effective teaching to occur in the regular education inclusion classroom with DHH students, I used the CEC's Initial Preparation Standards for teachers who teach DHH students. Eight interview questions related to the professional knowledge, skills, and competencies needed to teach DHH students were developed. With the help of committee members, the interview questions were edited and rewritten. After conducting two practice interviews, the interview questions were reconstructed to better obtain information that directly addressed the research questions guiding this study. I also solicited the assistance of a certified speech-language pathologist, a DHH-certified resource teacher, and a certified regular elementary education teacher to review, edit, and assist in constructing the interview questions for clarity and appropriateness. The input received from these individuals was important to the development of interview questions that focused specifically on obtaining information that addressed the research questions for the current study.

### **Procedures for Data Collection**

The data that I collected were expected to provide an understanding of the regular education K–6 grade teachers' perceptions of their preparedness to teach DHH students in relationship to their professional knowledge and educational backgrounds. The invitation for participants was posted on three social media groups (Facebook, Instagram, and LinkedIn). The social media accounts were general accounts posted to the public.

The LinkedIn account was targeted specifically to teachers. If anyone was interested in the study or had any questions, contact information for me was provided on the invitation. When a participant's response to the invitation was received, I contacted them by telephone to verify their eligibility to participate in the study. After verifying the participant's eligibility and interest in participating in the study, I emailed them an informed consent document and asked them to review the consent form and reply by email "I consent" before scheduling the interview. Once the consent to participate had been received, I established a day and time to conduct the Zoom interview and sent each participant a link to the scheduled Zoom interview. After conducting the recorded Zoom interview, which took about 35-40 minutes as indicated by the informed consent, I emailed each participant a \$20 gift card from Amazon.

In the Zoom interview, I began by thanking the participant for their time and interest in the study. Second, I reminded the participants of the confidentiality of the study and their rights to exit the study or decline to answer any questions. I reviewed the purpose of the study before I asked the interview questions. After I reviewed each recorded interview, I transcribed it in Word and labeled it with an identifying code, which included the interviewee's place order for the interview and a letter (e.g., Interviewee 1A). My comments during the interview were noted on the transcript in such a way as to not be confused with the participants' words. Unclear remarks were noted as unclear. Before I coded the transcript, I sent each interviewee their own interview transcript to allow them to verify and clarify if needed through email. After the data were collected

and analyzed, the data were summarized and presented in Chapter 4 and 5 of this study according to Walden University Institutional Review Board (IRB) standards. The data obtained were stored in a locked personal file cabinet according to Walden University's IRB standards.

### **Data Analysis Plan**

Analyzing qualitative research data consists of preparing and organizing the data for analysis in a transcript and then breaking down the transcript data into codes condensed into themes (Creswell, 2013). The condensed data can be represented in figures, tables, and discussions, according to Creswell (2013). Although there are specific steps to completing a qualitative data analysis, some variations may be noted in each researcher's strategies (Creswell, 2013). I examined each reviewed transcript, highlighting key words, phrases, quotes, and emphasized information.

Once I had identified codes, I grouped them in categories and common themes. It was important for me to describe, classify, and interpret the data into codes and themes first. Themes were developed based on the interview questions and the codes within the theme or category. To further understand the data and for interpretation purposes, I reviewed and linked the findings to current research literature and the conceptual framework that I covered in Chapter 2. I did not find any discrepant cases.

### **Issues of Trustworthiness**

Patton (2015) stated that the quality or trustworthiness of qualitative research is judged by the credibility, transferability, dependability, and confirmability of the

research. Bloomberg and Volpe (2008) stated that the transparency of research procedures is a precursor to trustworthiness and credibility. In other words, a researcher should describe the data collection procedures and the data analysis procedures exactly.

### **Credibility**

Credibility is the internal validity of a research project (Patton, 2015). To establish the trustworthiness of qualitative research, Patton (2015) stated that credibility must receive careful attention. Credibility was maintained throughout the research project by staying neutral as I collected the research data and by keeping a research log of my own thoughts and observations related to each interview. That way, I was able to honestly deal with any personal biases before analyzing the results. Additionally, the time spent interviewing the participants focused on the details relevant to the research questions. It was important to provide credible data from the views of each interviewee.

### **Transferability**

Transferability is achieved when a researcher has accurately reported the research procedures, data collection, and data analysis (Patton, 2015). Therefore, all phases of the research were completed as described in the methods section, which should make it possible for others to determine how transferrable my results are. The data collection procedures were recorded directly from the participant interviews. Furthermore, strategies such as the recording of the interview and allowing the participants to review the transcription of their interview allowed for accuracy of the data and increased the validation of the study (Creswell, 2013).

**Dependability**

Patton (2015) stated that dependability is synonymous with reliability and focuses on the researcher's ability to keep the research process logical, traceable, and documented. As stated in the methods section, the participants' interviews were recorded, transcribed, and subsequently reviewed by the participants of the study. This process provided an external check for the interpretation of the coding of data. In addition, the transcripts of the interviews were color coded to separate the participants' comments from the researcher's questions, comments, and notes.

**Confirmability**

Confirmability is necessary to ensure that the study's data are true and not made up by the researcher (Patton, 2015). The evidence of the study was supported by the recorded interviews, the verbatim transcripts, and the participants' verification of the transcribed interviews. Patton (2015) stated that confirmability involves linking interpretations, findings, and assertions. Therefore, for this study, the color-coded documentation of themes and the visual aids of the data confirmed the evidence of the data collected.

**Ethical Procedures**

Creswell (2013) stated that ethical issues will arise from the beginning of the study to the end of the study and handled accordingly. Creswell stated that there may be ethical issues that arise prior to conducting the study, during the participant selection process, and/or with the collection phase of a qualitative study. Furthermore, Creswell

stated that ethical issues may arise when the participants' privacy is not respected, when the researcher exerts power imbalances, or uses the participants during data collection.

An important step to securing an ethically sound study was to seek approval to conduct this study from Walden University's Institutional Review Board (IRB). The participants of this study received an informed consent form containing information about the purpose of the research, the length of the study, and all procedures of the study. Also, the participants were made aware of their rights to decline participation at any time, benefits of the study, and the availability of the researcher for any questions. Confidentiality of the participants' participation was maintained throughout the study, in the reporting of the study, and in the publication of the study. No names were used, and no other identifiers were included in the reporting of the data. The participants were allowed to review their interview transcript after transcribing through email.

The participants' involvement in this study consisted of a recorded interview with 8 regular education K–6 grade teacher selected for this study. After Walden University's Institutional Review Board's (IRB) approval [03-02-21-0331862], the solicitation of the teachers as participants was through postings on social media groups (Facebook, Instagram, and LinkedIn). Before the final selection of the participants was made, eligibility criteria were established.

None of the participants had a personal or professional relationship with the researcher. The purpose of the study was disclosed in writing to allow the participants freedom to review information before signing the consent forms. During the collection of

the data, complete transparency on how the data was used and presented was disclosed to build trust with the participants of the study. Interview times were negotiated to avoid any disruptions in gaining access to the data. The information for this study will be retained in a coded binder for 5 years in a locked file cabinet at my home office and then discarded properly according to Walden University's IRB guidelines.

### **Summary**

In Chapter 3, the research design, and rationale for the research were visited. It was established in Chapter 3 that I was the sole researcher, collector, and interpreter of the research data. The qualitative methodology for this study was used, and an outline of the procedures for recruitment, participation, data collection, and analysis were also presented in this chapter. Finally, issues of trustworthiness and the ethical procedures related to the participation of human subjects were outlined as they were related to the requirements of the Walden University's IRB. Chapter 4 will present the data of the study.



## Chapter 4: Results

The purpose of this basic qualitative study was to explore how to teach DHH students in the inclusion setting in relationship to teachers' professional knowledge, competencies, and skills. There were 2 research questions: (a) How do K–6 grade regular education classroom teachers describe the efficacy of college courses in preparing them to facilitate learning for DHH students enrolled in a regular classroom setting? (b) How do K–6 grade regular education classroom teachers describe the efficacy of post college professional development opportunities in preparing them to facilitate learning for DHH students enrolled in a regular classroom setting? In this chapter, I discuss the research setting, the demographics of the participants, the data collection process, and the details of the data analysis. Evidence of trustworthiness is addressed, and the results of the data analysis are presented.

### **Setting**

The collection of the data occurred through eight interviews. The interviews were conducted, and audio recorded through Zoom. The participants chose their settings for their interviews. Therefore, the interviews were in various locations conducive to the participants' comfort level and internet connections. The Zoom interviews lasted 30–45 minutes, depending on how much information the participants provided.

### **Demographics**

There were eight individuals chosen who met the inclusion criteria and agreed to participate in the study. Each participant was certified to teach Grades K–6 in Louisiana. The participants' number of years teaching ranged from 4–15 years as displayed in Table 1. The participant's number of years teaching was addressed with the first interview question. All the participants were employed within the Louisiana education system. Other identified demographic information was addressed during the participants' initial contact. There were no organizational conditions that influenced the participants or their experience at the time of the study.

### **Data Collection**

In this section, the process of when, where, and how the data were collected and organized is discussed. An invitation to participate in this study was posted on three social media sites: Facebook, LinkedIn, and Instagram. The first contact with the eight participants was made by telephone after they expressed an interest in the study either through an email or through a telephone call. By telephone, I discussed the details of the study and established eligibility to participate. Eligibility to participate included being a Louisiana certified K–12 regular education classroom teacher. A consent form that detailed the purpose, requirements, procedures, and other information about the study was emailed to each of the teachers.

**Table 1***Participants' Demographics*

Participant	Gender	Geography	Teaching experience
P1	F	Bogalusa	10–15 years
P2	M	Baton Rouge	1–5 years
P3	F	Baton Rouge	5–10 years
P4	F	Monroe	10–15 years
P5	F	Franklinton	1–5 years
P6	F	Bogalusa	10–15 years
P7	F	Wesley Ray	10–15 years
P8	F	Baton Rouge	1–5 years

Eight teachers consented to participate in this study. Demographic information about the teachers was collected (see Table 1), and the Zoom interviews were scheduled by telephone once the individuals' consents were received. The study commenced on March 5, 2021 and ended on April 10, 2021. The interviews were between 30 and 45 minutes long in the teachers' individually chosen locations where internet service was accessed. I began each individual teacher interview by reiterating the purpose and procedures of the study. There were eight interview questions, in addition to any follow-up questions that brought clarity to what was shared. I informed the teachers individually that I would transcribe the interview and send the transcription for review of accuracy. To

transcribe the interviews, I reviewed each Zoom audio recording. I edited unintelligible words, sentences, or phrases on the rough draft of the transcript as I listened to the audio recording of the interview. After I transcribed the interviews, I sent a copy of the transcript to the teachers to review for accuracy. Seven participants returned their individual transcripts without any corrections needed. One participant corrected a phrase that was unclear to her. Upon completion of the transcript review, I sent each participant a \$20 Amazon gift card. The participants were informed that they would receive a copy of the study's result via email once the study was completed. The transcribed data were ready for the data analysis process.

### **Data Analysis**

This section presents a detailed description of how the data were analyzed. The interview questions were developed to show the connections between the participant's professional knowledge, competencies, and skills and the two research questions. There were five themes developed during a line-by-line search for similarities in the teachers' responses. The themes developed from the interview data reflected that the teachers had varying efficacy and knowledge based on their training or lack thereof in their college and post college preparation.

All the data analysis, coding, and construction of the themes for this study were done manually. To understand the information collected during the interviews for this study, I performed initial coding of the information. I found common words and phrases that were consistent and important in the responses to interview questions. These words

and phrases were repeatedly expressed. I highlighted and color-coded the words, phrases, and statements on the transcripts and then transferred them onto a graph for further analysis.

The interview questions gave insight into the professional knowledge, competencies, and skills of the teachers as they related to how they viewed the efficacy of their college courses in their teacher education program and their post professional development in preparation to teach DHH students in the inclusive classroom setting. An inductive approach was used to identify the themes in the data because I was exploring this topic for a better understanding. The strategies used to confirm these themes included (a) performing a line-for-line review of each data transcript, (b) conducting a discourse analysis of what the participants said in the interview, and (c) categorizing the data to determine why the comments were repeatedly made. The interview transcripts were revisited for other comments or thoughts that I had that would further support the codes and give more meaning to the teachers' view of the efficacy of their teacher education courses and professional development courses that prepared them to teach DHH students in the inclusion setting. After several reviews of the data, I added the following experience to the demographic data: (a) no college courses, (b) college courses specific to DHH, (c) college courses not specific to DHH, (d) some professional development, (e) no professional developments, and (f) knowledge gained through experiences (see Table 2).

**Table 2***Participants' Responses to Preparedness Experience*

Participant	College courses specific to DHH	Colleges courses not specific to DHH	No college courses	Some professional development	No professional development	Knowledge gain through experiences
P1		X			X	X
P2			X		X	
P3		X		X		
P4		X			X	
P5		X			X	
P6			X		X	
P7			X	X		
P8			X		X	

**Themes**

There were five themes that emerged from the data obtained: (a) the inclusion classroom, (b) DHH students' educational challenges, (c) DHH students' communication challenges, (d) differentiated instruction for DHH students, and (e) collaboration. Using the study's two research questions, I inductively reviewed and compared the responses of the participants for similarities and differences to make sense of the data collected. From this, I developed themes for this study. Each theme was reflected in the interview

questions and responded to both research questions—preparedness in college and post college.

### **Evidence of Trustworthiness**

Merriam and Tisdell (2016) stated that the concepts of internal validity and reliability are captured through the credibility, transferability, dependability, and confirmability of research. In qualitative research, the goal is understanding the data and presenting the data in a manner such that authenticity and trustworthiness are obtained. Merriam and Tisdell stated that transparency, credibility, transferability, dependability, and confirmability are strategies for qualitative research to establish evidence of trustworthiness.

### **Credibility**

Throughout the research process, the credibility of the study was maintained. After receiving IRB approval, the invitation to participate in the study was posted on three social media platforms (Facebooks, LinkedIn, and Instagram). I kept a record of the contacts made by the interested individuals. The consent forms were sent to the interested individuals with a request to agree to participate once they understood the requirements and procedures of the study. Individual interviews were scheduled. Each participant was assigned an ID to not reveal their identity. The interview was audio recorded through Zoom. I remained neutral as I collected the information provided by the participants during the interview to keep an unbiased interpretation. I kept a log of my thoughts and observations for each interviewee during the interview. A log of my thoughts and

observations allowed me to deal with any personal biases before I was able to analyze the results. The focus of the interview was on obtaining details that were relevant to answering the research questions.

### **Transferability**

The transferability of this study was established by executing the research procedures, data collection, and data analysis of this study as described in the methods section. After each interview, an audio recording was obtained from Zoom. I transcribed the audio recording of each interview while maintaining the confidentiality of the participants. A typed rough draft of the interviews was completed. I reviewed and edited the transcript for intelligibility as I listened to the audio recordings four times. Before I analyzed the data, the participants received a copy of the transcript to review for accuracy.

### **Dependability**

The research process was logical, traceable, and documented as described in the methods section of this study. Within 5 days of sending the consent form, the participants' agreement to participate in this study by sending documentation stating "I consent" was obtained. An original audio copy of the interview along with an original and transcribed copy of the interview was secured as a password-protected file on my personal computer. In addition, the transcribed transcript presented a clear distinction between my responses and the interviewees' responses.



### **Confirmability**

The information presented by the participants during the interviews was assumed to be truthful. Therefore, the interview was audio recorded as evidence of the data collected. A verbatim transcript of each interview was presented and provided for the participant's verification for accuracy before the data were analyzed. Each interview was both interdependent and interactive, which contributed to the overall understanding of this study.

### **Results**

In this section, I explain the results of the data obtained from the interviews as they relate to how K–6 grade regular education teachers viewed the efficacy of college courses and professional developments in preparation to teach DHH students in the inclusive classroom setting. There were two research questions:

- RQ1. How do regular education K–6 grade classroom teachers describe the efficacy of college courses in preparing them to facilitate learning for DHH students enrolled in a regular classroom setting?
- RQ2. How do regular education K–6 grade classroom teachers describe the efficacy of post college professional development opportunities in preparing them to facilitate learning for DHH students enrolled in a regular classroom setting?

There were 5 themes pulled from the data obtained in the study: inclusive classroom, educational challenges for DHH students, communication challenges,

differentiating instruction, and collaboration. Both research questions solicited responses that confirmed or negated whether participants had obtained the knowledge, competency, and skills related to each of the themes presented, either in their teacher education program or during professional development. RQ1 addressed whether the participant had taken any courses in their teacher education program that prepared them to facilitate learning in the regular classroom setting for DHH students. RQ2 addressed participants' post professional development opportunities that prepared them to facilitate learning in the regular classroom setting for DHH students. All the themes were addressed in both research questions.

### **Theme 1: Inclusive Classroom**

According to McManis (2017), inclusion involves placing special needs students, regardless of their disability, into a general classroom setting with their nonhandicapped peers. The special needs students then receive instruction, interventions, and other supports to meet the demands of the core curriculum. Most of the teachers seemed familiar with the inclusion classroom. However, the teachers seemed unclear about their roles as inclusion teachers with DHH students enrolled in their classroom. Participants 1, 3, 5, 6, and 7 were familiar with the inclusion concept and understood the dynamics of learning in the inclusion classroom. Participant 2 emphasized that he chose to enter an alternative certification process and was not familiar with inclusion until after 5 years of teaching. Participants 4 and 8 gave fragmented descriptions of the inclusion concept.

Participant 1 recognized that inclusion is a mixture of regular education students with handicapped students in the regular classroom setting. Participant 1 stated,

An inclusive classroom setting is a mixture of regular education students and students within the special education department that have been identified with some sort of exceptionality. The ratio of regular ed. it would be more regular kids than special ed kids. And they wouldn't be separated. They're all included within the setting. And there would be a special education teacher that would come into the regular education classroom and co-teach, or pool small groups for special ed or provide accommodations within their regular seating arrangement.

Participant 2 contributed his lack of knowledge to training in an alternative teacher education program verses the regular elementary teacher education program.

Participant 2 stated,

I did not go through a traditional formal educational route. I chose the alternative certification route. That alternative certification route was online. I had an inclusion class my first year of teaching. I really did not know what an inclusion class was. Um, I, of course, you know, some of that stuff that you read about in all cert program, but it wasn't anything that was explicitly or directly taught to me. Um, so now five years in, um, I can say that an inclusion classroom is a classroom that inclusive of special ed and regular ed students. That is, uh, the special ed students supposed to be in a least restrictive environment.

Participant 3 stated, “I think an inclusive classroom setting means that students get accommodations, but they are still able to do the same skills as other students, just in an accommodated manner.” Participant 3 emphasized that students received accommodations but did not allude to the dynamics of the classroom consisting of both regular and handicapped students coexisting in one classroom.

Participant 4 stated, “The student would need extra resources. It would be seamless with the student getting their help or whatever support system they needed.” Like Participant 3, Participant 4 could not render understanding of the dynamics of the inclusion setting.

Participant 5 stated, “A classroom where there's a regular education teacher. There is a paraprofessional. There are students that are regular education students. And it also includes students that are special education.”

Participant 6 stated, “My description will be a regular education teacher, a special education teacher, a para if necessary, a mixture between regular education students and special education students.”

Participant 7 stated,

Some students who are special education students. I do have an inclusion teacher who comes in to co-teach. I also have a special ed para, full-time, due to one of my students. So, I’m teaching the regular curriculum where, you know, differentiate as much as we can.

Participant 8 stated,

I guess a teacher or whoever accompanies them coming into the room for their learning, and then taking them back to either reiterate what they have learned or, maybe kind of bringing it down to a level, which they can understand.

## **Theme 2: Educational Challenges**

Research indicated that the academic achievements of DHH students in comparison to their hearing peers have been inferior (Cawthon, 2015; Maiorana-Basas, 2018). The educational challenges may be in the areas of English-Language Arts (ELA), Math, and other content areas (LaSasso and Crain, 2015; Trussell & Esterbrooks, 2017). When asked to describe the educational challenges of DHH students, participants 2, 5, 6, 7 specifically stated that they were unfamiliar with DHH students. Participant 2 stated nervously,

So, I've never dealt with deaf, uh, what's the other hearing? I haven't had, but I can only imagine that it would be a lot. Especially being in the classroom where you have to deal with so many different types of learners.

Participant 6 stated that it would be a challenge for her to even relay information to the DHH student in the classroom. Most of the teachers seemed to describe the educational challenges experienced by DHH based on their educational guesses. This conclusion was based on their unsure descriptions which were presented with a lack of confidence.

Participant 1 stated,

Aside from just hearing the teacher speak and give instruction, I feel that there would be some difficulty with them participating in class discussions with other students. Hearing all of the other students' input and being able to successfully participate in those discussions.

Participant 2 stated,

So, I've never dealt with deaf, uh, what's the other hearing? I haven't had, but I can only imagine that it would be a lot. Especially being in the classroom where you have to deal with so many different types of learners. The teacher given instructions may be going too fast if the student do not know how to lip read well. Um, and even with not just with the explanation of it, but also the understanding of the content being put in a class with other, other supposedly regular ed students. So yeah, the challenges would be getting lost in just a regular pace in a regular setting. So not just like I mentioned before, not just with the instructions, but also grasping the content and even the resources that it takes. Some schools don't have the resources that, that they need in order to fully help out students that have those type of deficiencies or impairments. So, if they don't have what's needed, I'm sure that could be another challenge for the student as well.

Participant 3 stated,

I think just accommodating in a way that they are able to still be a part of class. The resources that school must be successful in that manner. They probably would need specialized equipment to work with the students in the classroom.

Participant 4 stated,

Definitely getting resources, equipment there to support them. Making sure that the student is getting everything or getting the instruction or directions. Having a para or aid there to at least ensure that the student gets or understand what is going on in the classroom. Or, having a voice amplifier or different things like that for the student.

Participant 5 stated,

I have not taught a student that may be deaf or hard of hearing. But just to guess, as far as my experience I could not say that I would be able to. I am not trained in sign language. I have not been trained in anything that would help for us.

Participant 6 stated,

I would think the challenges may be missing something important. I honestly really do not know how I would relay information to them and make sure that they hear it, understand it, comprehend it. So that will be the challenge for me.

Participant 7 stated,

I hadn't really had that experience. I know my son who has a little bit of hard of hearing diagnosed. If there's extra noise, that is going to make it hard for them. Just from his experience. I have not had experience of teaching someone, but they would certainly, need to be close to the teacher.

Participant 8 stated,

So first if your teacher has not been trained, so to speak, maybe to speak sign language or whatever the case may be, you are already at a deficit. Being deaf or hard of hearing the sounds that they make, like even those are not resonating with you. So, the information is not being passed on as your teacher is instructing.

### **Theme 3: Communication Challenges**

Many DHH students enter their school year without a complete grasp of spoken or signed language (Becker & Bowen, 2018; Luft, 2017; Marshack, 2015). The responses of the participants indicated that the teachers were either unfamiliar or partially familiar with the communication challenges of DHH students. Most of the teachers were unfamiliar with the communication challenges of DHH students in the regular classroom setting. All the teachers seemed to rely on their knowledge of using language and communication to explain the communication challenges for DHH students. Participant 2 stated that her current school setting was designated for the DHH population but had not receive any related teacher training. Participant 3 stated, “I think they would face difficulty with teachers not being trained; I am not personally trained to work in that setting, so I don't know how successful I would be.”

Participant 1 stated,

Probably communicating. Of course, participating in group discussions. I feel like that would be a challenge for them. Not only with hearing but being able to speak in a manner where their other classmates could hear them and understand them.



And if it is a child that uses sign language well then of course, there's that language barrier between them and the other children.

Participant 2 stated,

I worked at a school, um, that was tailored for kids in the district to come that had hearing impairment. And we had a, a large population of, of students that had the, these, um, challenges. However, I, I think for me it would make more sense if you would train and develop the whole school. Cause you never know whether that student would be in your class or not. I remember when I was there. We never went through any type of training. We never went through any type of coursework. We were never provided any type of development on how we address or even approach any of these types of students. And so, I think it's a sad thing to have that. And we'd be in a central location for those type of kids in and teachers are not properly trained. Of course, you will not get everything in school. Right. But you could at least know that you work at school where it's an attractive school for those types of kids, that subgroup of kids, you would think that we would have been trained to develop. So, I've never been exposed. I've never seen a plan for them and wouldn't know how to implement it. If I did see it because of the lack of no content or resources, no nothing. You know I believe that every student should have the equitable resources, then the equality to be able to learn, but if we don't have what we need to reach them, then they'll be able to be a gap in that process.

Participant 3 stated,

I think they would face difficulty with teachers not being trained; I am not personally trained to work in that setting, so I don't know how successful I would be if I were not trained to teach students in that specialized manner. And one of the main challenges in that classroom were just making sure number one, that they got all the accommodations they needed while still attending to other students. But one of the barriers sometimes were language.

Participant 4 stated,

From being able to understand or get the instruction from the classroom teacher. They are not provided with the resources, where their learning barrier comes into play because they do not have everything that they needed to comprehend or even to be able to communicate effectively. If there is a problem or for their question clarification on different things. Making sure the student can communicate to the teacher their need. Making sure the student is comfortable enough to even communicate that.

Participant 5 stated,

I'll do one at a time. The one for the child that may be deaf, it will be hard to, just speaking without some type of technology or to know any sign language for me to be able to get across what they would need to learn. So, the challenge would be I would have to have some type of technology or some special training to properly

educate those kids. But that would be my challenge. Me, I would have to be properly trained to properly educate that child.

Participant 6 stated, “They don't understand. How could they tell me they do not understand? Could they get the help that they need?”

Participant 7 stated,

I think it would be hard because most teachers and staff members would not know sign language. If that child needed sign language, that child may read lips. It has always interested me as far as hearing impaired because my best friend growing up parents were deaf. As a teacher, I would hope that I could learn how to communicate hope that I would find ways to communicate with them.

Participant 8 stated,

There is no way to make sure they understand. To make sure that they are even hearing what is being asked of them or what is being taught to them. So, a lot of people like to when somebody does not understand you repeat, what does that look like for a child who does not understand, because they could not hear you in the first place. It is like you are repeating, but they didn't get it the first time. Not because they do not understand, but because it's not being provided to them in a way that they can get it in the first place.

#### **Theme 4: Differentiating Instruction**

When I asked the participants to differentiate the instruction of a vocabulary lesson for a DHH student, 6 /8 of the teachers' responded by using their background

knowledge on general ways to differentiate instruction for a vocabulary lesson for a DHH student. The remaining 2 teachers could not differentiate the instruction for a vocabulary lesson for a DHH student in the regular classroom session so, no effort was made.

Participant 1 stated,

I would have it written of course, written out, typed out maybe pictures to go along with it and make sure that there's some illustrations there. it would depend on the grade level too. If it is a child that you use as ASL, then I would attempt to learn those signs for those words.

Participant 2 stated,

I definitely believe that small groups are important just in an inclusion classroom, in any kind of classroom where there's regular or even an inclusive classroom, because of course you're going to have students at different levels anyway, whether they have IEP, 504, or whatever type of, um, learning barrier or deficiencies that they may have. The only way that I think in my mind that I would be able to do that, especially for vocabulary, praying that I have a person that signs that I would assign her to the person that they will be assigned to you if they don't have a sign. I wouldn't know. I'm a good teacher handling something like that. I wouldn't know how to approach that.

Participant 3 stated,

I would probably put them with a peer, number one. I would probably pair them or put everyone in groups, so it will not seem like that student just needs another

student. I would put everyone in groups and then have assisted device to help that student with that task. I could also maybe hold up note cards and a student could answer in a different way other than verbally since they are not visually impaired. I noticed hard of hearing students would probably have another barrier which is their language. So, they could hold up a card where the answers were vocabulary instead of answering verbally. I would also need to be privy to how that student does hear and how much hearing loss that student has experienced to accommodate.

Participant 4 stated,

You're providing print materials as a support. I would print out directions, print out materials. Give the student a preferential seating, close to the front so that the student can see your mouth or see your face rather. In our district, we now use different Google features like text to speech.

Participant 5 stated,

I'm making a guess; I haven't been trained. I would think that technology may come in handy; it would probably be things that they can do visually. Maybe they would have lessons that they need using sign language or ways that the child could possibly get what they need.

Participant 6 stated, "I have no idea."

Participant 7 stated,

I think technology, making some type of PowerPoint or some type of game online. Also, pictures with words, maybe a matching game, memory cards or something like that would have pictures and words to match or definitions. But incorporate, I think the technology.

Participant 8 stated,

I think personally, I would use pictures and other visual tools as opposed to trying to get them to maybe hear, because like I said, they might not be hearing it that way. You're not sure if they've been exposed to sign language, but you do know that they've seen some of these things. And so if it can be in the form of what reading words or visual aids. That will be my primary, at least my shot at it, because I can honestly say like, nobody really tells you how to handle it. So that will be the first thing I try. I'm trying to give them some kind of visual aid or a written way to learn it, just to make sure that they even understand the word that they're being asked to learn the definition for.

### **Theme 5: Collaboration**

The overall purpose of collaboration is the ability to put the needs of the student first by creating an environment of shared responsibility in the students' academic achievement, attendance, behavior, etc. (Miller et al., 2018). All the teachers responded favorably to the importance of collaborating with other disciplines involved in educating DHH students who are enrolled in the regular education setting. Participant 1 stated, "Collaboration was introduced to me before my coursework in special education."

Participant 6 stated, “you should reach out and collaborate with someone who knows how to get the information to the students, how to help you plan for that child.”

Participant 1 stated,

It's crucial. It is very important so that you can learn strategies that have worked for them and talk about things that have or have not worked. Or, just to gain from that knowledge they have noticed with the child that could be beneficial to you.

When it seems like there is always one colleague that knows an important fact that the others do not in the beginning. So, it is crucial to collaborate with them.

Collaboration was introduced to me before my coursework in special education.

When I was the regular ed teacher in an inclusive setting. I would have to fill out collaboration forms with the special education teacher that came into my classroom.

Participant 2 stated,

It's Important to collaborate. Because number one, I think even though they have that challenge; they are still expected to be on the level of all other students. And of course, that's why we have laws and policies to be able to supply these kids with whatever thing they need not to be a crutch, but to make sure that they are on the same playing field, a level field as anybody else. Just because they have these types of challenges do not commune, uh, completely excommunicate them out of the learning environment, the learning process. And so, I think collaboration is very important because there's a simple fact that number 1, we all need to be on

the same page. Number 2, those that are specialized in that area need to be able to know where the other general or regular ed teachers are. So, they would know how to plan or tailor that lesson, or lessons to reach that child or those subgroups of kids. Of course, if they're specialized in that area, they would need to know what everybody else is doing because we all about inclusion and diversity now, right. And that's not just about ethnicity or gender, but also with disabilities. And I don't think that a student, because of that learning challenge should be, still held to a high standard. And so, I believe that collaboration is good because for those that, like I mentioned before. I do have that specialty in that area, so they can make sure that you know that their kid is not left behind.

Participant 3 stated,

Exceptionally important collaboration allows you not only to see your faults in a thing, but it allows you to hear new strategies that maybe you hadn't tried in your classroom. It also allows you to have someone who, hey, we have the same types of students. We're both trying to make sure their needs are met and bounce ideas off one another, to see how we can efficiently and effectively do that.

Participant 4 stated,

You want to make sure that you're doing what is in the best need of the student and making sure that that is being applied to every classroom or every area that student is in One teacher may have found a strategy or a resource that would be beneficial in other areas. So that would be beneficial to other students in different



areas in the classroom, and as well as kind of doing a checks and balances system. Well, how is he or she is doing in your classroom. What are you doing? And making sure that the student has everything that they need to be successful, whether it is modifying lessons, modifying projects slightly, depending on how it is.

Participant 5 stated,

I think it would be very important so that we can be on the same page. I mean, because we could work together because they may know more about it than I do and vice versa. We could work together if there are things that I noticed that I may not understand or that I may need more assistance with. We can get together for training and work together to make sure that we are doing the same thing for the child.

Participant 6 stated,

It would be very important to collaborate. You want to make sure that child is getting everything that they need. I mean, equity, every child needs what they need to learn. So, you should reach out and collaborate with someone who knows how to get the information to the students, how to help you plan for that child.

Participant 7 stated,

We need to collaborate. If you have somebody that teaches a deaf student that you have not taught before. I mean, there is a lot to be learned from someone with

experience. Then you have that student, find out how he learns in one way, and you make him incorporate it in your place.

Participant 8 stated,

Extremely important because for instance like myself, I have not had any experience in the area. And so, to be able to be surrounded by or helped by someone who may have had experience, they can give you some tips. So, they can kind of at least give you a starting point.

### **Summary**

An analysis of the data obtained from the interview supported the answers to both research questions. To answer research question 2, the teachers in this study believed that their teacher education programs did not prepare them to teach DHH students enrolled in the general education classroom. Based on the data, 4/8 of the teachers had no college courses specific to DHH students. To answer research question 2, 6/8 of the teachers did not attend any professional development or post graduate courses voluntarily nor were they assigned by their administrators that prepared them to teach DHH students enrolled in the general education classroom.

To the best of their knowledge, the teachers in this study provided honest and informative information that related to their teacher education program and professional development that added to the professional knowledge, competencies, and skills needed to teach DHH students in the regular classroom setting. Chapter 5 will present the interpretation of the findings, the limitations of the study, recommendations, and

implications of the study. Additionally, a literature review of the findings will be discussed in comparison to the conceptual framework and literature review presented in Chapter 2. Finally, I will discuss the social change connected to this study and recommendations for future studies related to this study

## Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this basic qualitative study was to explore how eight Louisiana regular education K–6 grade classroom teachers described the efficacy of their college courses in preparing them to facilitate learning for DHH students enrolled in a regular classroom setting. The practice of educating special needs students in the regular classroom affords many opportunities for the DHH student (Carter et al., 2015). However, both teachers and DHH students are confronted with challenges that cannot be ignored (Darling-Hammond et al., 2017; Guardino & Cannon, 2015). The preparedness of regular education teachers to teach DHH students in the regular education classroom is important for successful learning (Greenfield et al., 2016). The inclusion teacher should have some essential professional knowledge, competencies, and skills that can improve the effectiveness of instruction for the DHH student enrolled in the inclusion classroom (CEC, 2018).

### **Research Question 1 Discussion**

RQ1 explored how Louisiana’s regular education K–6 grade classroom teachers described the efficacy of college courses in preparing them to facilitate learning for DHH students enrolled in a regular classroom setting. The results of this study indicated that Louisiana K–6 regular education teachers believed that the college courses in their teacher education programs did not sufficiently prepare them to facilitate learning for DHH students enrolled in the regular classroom setting. Most of the teachers remembered taking a special education course in their teacher education program that did not

specifically address DHH students. Most of the participants in this study believed that the one college course was not enough to adequately prepare them to teach DHH students in the regular classroom setting.

### **Research Question 2: Discussion**

RQ2 addressed how regular education K–6 grade classroom teachers describe the efficacy of post college professional development opportunities in preparing them to facilitate learning for DHH students enrolled in a regular classroom setting. The participants in the study believed that school administrators did not provide any type of in-services or workshops that allowed them to become more familiar with the learning needs of the DHH student. Additionally, the teachers did not independently seek opportunities in the form of workshops to extend their knowledge, competencies, and skills that would allow them to facilitate learning for DHH students enrolled in the regular classroom. In comparison to other research, the information obtained from this study suggests that Louisiana’s K–6 regular educators did not possess the knowledge, competencies, or skills necessary to teach DHH students in the inclusion classroom setting (Ayantoye & Luckner, 2016; Bamu et al., 2017; Guardino, 2015; Luckner & Dorn, 2017; Salter et al., 2017).

### **Interpretation of the Findings**

The findings in this study indicated that regular education teachers were confident in how their coursework in their teacher education programs prepared them to teach regular students. However, most believed that they needed more training in deaf

education as indicated in previous research studies (Ayantoye & Luckner, 2016; Luckner & Dorn, 2017; Salter et al., 2017).

Luckner and Dorn (2017) surveyed a sample of national teachers who taught DHH students to explore their perceptions. The study revealed that 50% of the teachers were satisfied with their jobs but believed that they needed more professional development. This research explored how regular education teachers viewed their preparedness to teach DHH students. The current study as well as Luckner and Dorn's study revealed the need to revisit how teachers viewed their ability to face the challenges that they encountered when teaching DHH students.

Salter et al. (2017) conducted a study to investigate how teaching assistants described the learning experiences of DHH students in the inclusive setting. Salter et al. revealed that the teaching assistants believed that most of the teachers whom they assisted were not aware of the needs of DHH students. As a result, the teacher assistants reported that the teachers had unrealistic expectations of DHH students. The implications of Salter et al.'s study connected with the current study because it explored the preparedness of teachers who teach DHH students. This study and Salter et al.'s study supported the conclusion that the teachers were not prepared.

The findings in this study extend the knowledge of how teacher education programs and planned professional developments in deaf education influence teacher preparedness to teach DHH in the inclusion classroom setting. Areas of concern

presented during the teachers' interviews included topics related to the professional knowledge, competencies, and skills needed to teach DHH students.

### **Literature Review and Teacher Knowledge, Competencies, and Skills**

#### **Inclusive Classroom**

In this study, most of the teachers described the structure of an inclusion classroom in relation to having special needs students attending a regular classroom setting with a regular education teacher with regular education students. Morningstar et al. (2015) presented two elements important to the inclusion classroom: supports needed for learning and supports needed to engage in learning. Supports needed for learning include UDL, interventions, individualized accommodations, and modifications. Many of the teachers in this study did not include the supports needed for learning in their responses. Participant 1 said, "Inclusion is inclusive of special education and regular education students." Participant 2 said, "We've never went through any type of training on inclusion." Most of the teachers vaguely remembered taking an introductory course in special education during their teacher education programs. Like the current study, Guardino (2015) investigated teachers' professional knowledge, trainings, and strategies. Guardino concluded that the DHH teacher education programs of the participants from many regions across the United States needed to be improved. The teachers in this study did not have any professional developments postgraduation. Participant 6 stated, "I have not been taught," which was echoed by the participants throughout the interview process.

### **Education and Communication Challenges**

Most of the teachers in this study attempted to describe the educational and communication challenges faced by DHH students. However, they did not present enough information to demonstrate their understanding of the educational and communication challenges experienced by DHH students. Similarly, Salter et al.'s (2017) study of how teaching assistants described the learning experiences of DHH students in the inclusive setting revealed that teachers were not aware of the challenges experienced by DHH students. Furthermore, the teachers in Salter et al.'s study had expectations that were unrealistic for DHH students. Yoshinaga-Itano et al. (2017) examined the impact of the current Early Hearing Detection and Intervention (EHDI) 1-3-6 policy on vocabulary outcomes across a wide geographic area. Yoshinaga-Itano et al. concluded that the unique set of communication, academic, and cultural challenges faced by DHH students requires that the teacher have specific competencies and skills. As Yoshinaga-Itano et al. found, it is the conclusion of the current study that teachers of DHH students should possess specific professional knowledge, competencies, and skills to be effective.

### **Differentiating Instruction**

In the current study, teachers attempted to differentiate instruction for DHH students who may be enrolled in the regular classroom, but the teachers were not confident in completing this task. The information provided by the teachers in this study included strategies for differentiating instruction for the DHH student that resembled some knowledge of the UDL framework. Navarro et al. (2016) stated that UDL



recognizes the diversity of learners in the learning environment. The three principles of UDL developed to overcome environmental barriers to learning are representation (modifications), action and expression (alternative methods of communication), and engagement (strategies for diverse needs). The teachers in this study concentrated mostly on modifications of the assignments. Dack (2017) reviewed teachers' interpretation of what it means to differentiate instruction. After providing teachers with specific coursework in Tomlinson's model of differentiating instruction, the teachers were better at providing student support. According to Dack, the ability to differentiate instruction was obtained from experiences gained from coursework as well as teaching experiences that provided a better understanding of how to differentiate instruction. The current study suggested that the ability to differentiate instruction should be part of the DHH teacher's professional knowledge.

### **Collaboration**

Collaboration involves individuals working together to achieve a common goal (Archibald, 2017). Miller et al.'s (2018) research on teachers as collaborating partners with teachers and parents indicated that most classroom teachers were not skilled at collaborating with other teachers or parents. Kinsella-Meirer and Gala (2016) stated that collaboration was essential between parents, teachers, and students. However, Kinsella-Meirer and Gala believed that a collaborative partnership between the key stakeholders was difficult to achieve. On the contrary, in this study, all the teachers emphasized the importance of collaborating with other professionals who taught DHH students. Although

most of the teachers never taught DHH students, they believed that collaboration was vital to executing an effective inclusion program for DHH students and provided substantiated examples. Participant 1 stated, “It’s crucial.” Participant 4 stated, “You want to make sure that you’re doing what is in the best need of the student.” Ayantoye and Luckner (2016) conducted a case study of the success of DHH students in inclusive settings. The study revealed that the success of DHH students was related to the collaborative effort of parents, teachers, counselors, speech therapist, and resource teacher in addition to the use of technology. Like the current study, Ayantoye and Luckner’s study emphasized that collaboration is an important trait for teachers who teach DHH students. The ability to collaborate has been noted by the CEC as part of the professional knowledge, competency, and skills needed to teach DHH students. The current study and Ayantoye and Luckner’s study revealed the importance of collaboration among teachers and members of other disciplines involved in the education of DHH students.

### **Literature Review and the Findings of the Current Study**

#### **Research Question 1: Literature Discussion**

There were a limited number of studies that explored how regular education teachers prepared themselves to teach DHH students in the regular classroom setting. This study explored the preparedness of Louisiana’s K–6 regular education teachers to teach DHH students. The findings of this study indicated that Louisiana’s K–6 regular education teachers are not prepared to teach DHH students in the regular classroom

setting. Bamu et al. (2017) studied the educational challenges faced by six teachers and six hearing-impaired students. Similar to the findings of this study, Bamu et al. concluded that many teacher-education programs have not prepared regular education teachers to teach DHH students. Likewise, Ayantoye and Luckner (2016) also believed that regular classroom teachers did not receive appropriate training in their teacher-education programs. Ayantoye and Luckner's study indicated that there is a need for teachers to have more training to be more effective in the inclusion classroom with DHH students.

### **Research Question 2: Literature Discussion**

The responses of the teachers in this study indicated the need for more professional development on the inclusion of DHH students enrolled in the regular classroom setting. Several studies presented the same conclusions. Research conducted by Sibon-Macarro et al. (2014) on rural perspectives on models, services, and resources for DHH students found that a successful inclusion program for DHH students occurred when teachers improved their professional knowledge and skills. Similarly, Luckner and Dorn's (2017) study of a national sample of teachers of DHH students found that teachers believed that they needed more professional knowledge. Finally, Greenfield et al.'s (2016) investigation of the preparation and perceptions of preservice teachers of students with learning disabilities concluded that any professional training for teachers improved the overall view of inclusion.

### **Current Study Findings as They Relate to the Conceptual Framework**

According to Cogan's trait theory of profession, traits are described as the expertise, knowledge, and competencies present to distinguish one occupation from another. Guided by the standards developed by the CEC, effective teaching of DHH students begins with knowledge, competencies, and skills regarding (a) the DHH learners' individual differences, (b) the DHH learner and the learning environment, (c) the DHH curricular content, (d) the DHH assessment needs, (e) the DHH need for instructional planning and specialized strategies, (f) the teacher's participation in professional learning and ethical practices, and (g) the teachers' ability to institute collaborative partnerships between parents and teachers (CEC, 2018). The information obtained from the teachers in this study indicated that most of the teachers did not have the knowledge, skills, or competencies needed to teach DHH students.

### **Limitations of the Study**

The participants in this study were the result of a purposeful sample. There were two possible limitations in this study. The first limitation in this study was that it was limited to eight to 10 participants. The sample size may challenge the validity of this study. The study was posted on three social media sites: Facebook, Instagram, and LinkedIn. The invitation to the study was posted three times, which resulted in the selection of eight participants for this study. The second limitation to this study was that the study was limited to kindergarten through sixth-grade teachers who were certified in Louisiana. Here again, the sample size may challenge the validity of the study because

the study used regular K -6 grade teachers only. There will be no difficulty with the transferability of the study. This study followed a logical and traceable process that will confirm the dependability of this study for replication purposes. Therefore, future studies should explore the preparedness of regular education teachers from all grade levels within a broader region.

### **Recommendations**

This study opens the door to complete more studies that will explore regular education teachers' preparedness to teach DHH students in the regular classroom setting. More studies are needed and have been suggested by other researchers to better address the challenges experienced by DHH students and their teachers in inclusion classroom settings (Guardino, 2015; Wanis, 2018). This study can be extended to include regular education teachers from elementary, middle, and high school to improve validity. Secondly, further studies on teacher preparation to teach DHH students can also be expanded to include teachers from other geographical areas in the United States.

A common theme expressed throughout this study during the teachers' interviews was "I did not receive any training that prepared me to teach DHH students." Most of the teachers believed that the coursework taken in their teacher-education program lacked the content that would familiarize them with the knowledge, competencies, and skills to successfully facilitate learning for DHH students. Regarding professional development, here again, most of the teachers had not been involved in such a way that would provide them with the knowledge, competencies, and skills to successfully facilitate learning for

DHH students. Studies of teachers' professional knowledge and skills after specific course work related to teaching students in the inclusion classroom are also warranted.

Finally, this study can be used as a guide to redevelop regular teacher education programs. A review of universities' teacher education programs can evaluate the benefits of including within their curriculum specific coursework that develops an understanding of the UDL framework. A study of the UDL framework will prepare teachers with a better understanding of how to differentiate instruction for any student. Also, if not already done, teacher education programs should allow teachers to take a course that addresses the specific needs of a special education population that they are most interested in. Coupled with a general special education course that tries to cover all, a course specific to DHH students can be a great access for teachers who are confronted with teaching DHH students in the inclusive classroom setting. Professional development on facilitating learning for DHH students can also enhance the knowledge, competency, and skills of DHH inclusion teachers in grades K– 6. Administrators can organize trainings for all their teachers because sometimes it is difficult to predict when and how many DHH students will enroll in their schools. Teachers can take responsibility as well to expand their knowledge and skills.

### **Implications for Positive Social Change**

#### **Students**

This study may create positive social change for students because it may serve as a guide to develop opportunities for learning that are purposely planned for DHH

students. The findings in this study contributed to the body of knowledge and provide an understanding of the general education teachers' preparedness to teach DHH students in the regular classroom setting. Universities, school administrators, and teachers will understand the significance of understanding the unique challenges experienced by DHH students enrolled in the regular setting.

### **Teachers**

This study may create positive social change for teachers. The current study can be used as a guide to update regular teacher-education programs because the findings in this study indicated that teachers were not confident in the efficacy of their teacher education programs. Teachers concluded that they were not knowledgeable or competent to teach DHH students in the inclusive classroom. Information to school administrators about the importance of developing professional development courses for teachers at their school was evident in this study.

### **Teacher Education Programs**

This study may create positive social change for universities in the development of teacher education programs. This study explored how teachers viewed their teacher-education programs and post college professional developments in relation to the professional knowledge, competencies, and skills needed to facilitate learning for DHH students as described by CEC. Like previous studies (Greenfield et al., 2016; Luckner & Dorn, 2017; Sibon-Macarro et al., 2014) the information obtained from the teacher

interviews in this study implies that teachers need more training on how to facilitate learning for the DHH student in the inclusive classroom setting.

### **Conclusion**

The purpose of this basic qualitative study was to explore regular education K–6 grade teachers' preparedness to teach DHH students in the inclusive classroom setting in relationship to their professional knowledge, competencies, and skills. There were two research questions that guided this study:

- RQ1. How do regular education K– 6 grade classroom teachers describe the efficacy of college courses in preparing them to facilitate learning for DHH students enrolled in a regular classroom setting?
- RQ2. How do regular education K– 6 grade classroom teachers describe the efficacy of post college professional development opportunities in preparing them to facilitate learning for DHH students enrolled in a regular classroom setting?

The semi-structured interviews were developed and conducted in a manner which allowed the teachers themselves to supply data to answer each research question. The experiences of the teachers varied in regards to their educational background related to DHH students: (a) some had professional development, (b) no professional developments, (c) no college courses, (d) had college courses specific to DHH, (e) had college courses not specific to DHH, and (f) acquired knowledge through experiences. These findings indicated that less than a fourth of the teachers intentionally enrolled in



college coursework and professional development that would provide the knowledge, competencies, and skills needed to facilitate learning for DHH students enrolled in the inclusion classroom setting.

Five themes emerged from the data related to the two research questions: (a) inclusive classroom, (b) educational challenges, (c) communications challenges, (d) differentiating instruction, and (e) collaboration.

The concluding factor from this study noted that Louisiana's K–6 regular education teachers were not confident in the coursework taken during their teacher education program to prepare them to teach DHH students in the regular classroom setting. In addition, the school administrators did not provide or suggest the attendance at any professional developments to prepare them for potential DHH students.

During this study, I maintained a neutral attitude during the interviews. Although disappointed with the results, the findings gave me directions for future studies and ideas for professional developments for teachers. This area of study is important to me because as a hearing-impaired resource teacher, I have seen first-hand how easily DHH students and teachers in the inclusion classroom become frustrated during the instructional process. As a speech language pathologist, I have seen how many teachers lack knowledge of the DHH student's communication skills which affects the instructional process. My goal is to provide teachers with knowledge and the tools needed to be successful as facilitators of learning in the inclusion classroom with DHH students.

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## Appendix: Interview Questions

1. How many years have you been teaching?
2. Describe an inclusive classroom setting.
3. Describe the educational challenges that deaf or hard of hearing students (DHH) may experience in the inclusive classroom setting.
4. Describe the communication challenges that DHH students may experience in the inclusive classroom setting.
5. Describe an example of how you would differentiate a weekly vocabulary activity for a DHH student in the inclusive classroom setting.
6. Describe how important it is to collaborate with others who teach DHH students.
7. Describe any college coursework that prepared you to teach DHH students who are enrolled in the inclusive classroom setting.
8. Describe any post college coursework/professional developments that prepared you to teach DHH students who are enrolled in the inclusive classroom setting.
9. How many years have you been teaching?
10. Describe the educational challenges that deaf or hard of hearing students (DHH) may experience in the inclusive classroom setting.
11. Describe the communication challenges that DHH students may experience in the inclusive classroom setting.

12. Describe an example of how you would differentiate a weekly vocabulary activity for a DHH student in the inclusive classroom setting.
13. Describe how important it is to collaborate with others who teach DHH students.
14. Describe any college coursework that prepared you to teach DHH students who are enrolled in the inclusive classroom setting.
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