An Investigation into the Skill Set of Speech-Language Pathologists Working with Profoundly Deaf Children: A Study in Context

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Abstract

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This study explored the skill sets possessed by speech-language pathologists working with profoundly deaf children in three types of settings (state-funded “4201” schools for the deaf, Board of Cooperative Educational Services programs, and local school districts) throughout New York State. The phenomenological method of inquiry was utilized to investigate these skill sets within the varying contexts of speech pathologists’ work environments and the deaf students within those settings. Fourteen speech-language pathologists were interviewed for this study; data was triangulated by the collection of responses to case studies and field notes. When possible, supervisors of participants were interviewed as well. Results demonstrated that speech pathologists working with the deaf population possess numerous specialized skills, to varying degrees, depending on the context within which they practice. Findings have implications both for clinical preparation and practice, as well as for education planning and policy in New York State.
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DEDICATION

I would like to dedicate this dissertation to the deaf and hard of hearing children throughout New York State and to the professionals who work tirelessly with them and their families to set and achieve high standards for academic achievement, communication, and socialization.
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An Investigation into the Skill Set of Speech-Language Pathologists Working with Profoundly Deaf Students: A Study in Context

Statement of the Problem

Scholars have widely documented in the literature that a discrepancy exists between the speech and language therapy needs of severely-to-profoundly deaf children and speech language pathologists’ preparedness to meet these needs in the local school district setting (Moseley et al., 1994; Chabon, 2010; Yoshinaga-Itano, 1997). Recently proposed (and ultimately overturned) funding cuts to a small group of specialized, state-funded schools for children with low incidence disabilities in New York State, including eight schools for profoundly deaf children, has led to widespread concern that these schools might ultimately be closed, forcing their students into schools in their local districts where professionals, though well-credentialed, may not be able to meet their needs. Considering the limited knowledge, skills, and backgrounds most speech language pathologists in local school districts report to have with profoundly deaf children, specialized schools for the deaf may be the only institutions that can adequately and appropriately meet the diverse and challenging needs of these students.

Background

In the winter of 2011 the governor of New York State, Andrew Cuomo, proposed to cut direct funding to a group of schools known as the “4201 schools” in an effort to balance the state budget. “4201 schools” are a group of eleven schools serving students with low incidence disabilities that are supported by New
York State and listed under Section 4201 of the New York State Education Law (Article 85, § 4201). Of these eleven schools, eight are schools for children with severe-to-profound deafness, six located in the New York City metropolitan area (including Westchester County and Long Island) and two serving students in upstate New York. For the purposes of this paper, these eight schools will be referred to as the “4201 schools” for the deaf.” In his Deficit Reduction Plan, Governor Cuomo proposed changing the funding structure of the “4201 schools” to a “rate-setting” model, meaning that instead of continuing to support 90% of the schools’ budgets as it had in the past, local school districts would inherit the responsibility of paying the tuition for their students to attend these schools (“4201 schools” Association, 2011). Tuition fees would be based on a per-student cost of approximately $76,116 per student per year (“4201 schools” Association, n.d.). In addition, the proposal included language that would have prohibited the “4201 schools” from conducting evaluations and developing Individualized Education Plans (IEPs) for their own students at the schools. Instead, evaluations and IEP development were to be conducted by the local school district (“4201 schools” Association, n.d.), presumably by professionals lacking experience with students classified as having low incidence disabilities, including profound deafness (Moseley et al., 1994; Chabon, 2010; Yoshinaga-Itano, 1997.)

Immediately, alarm spread throughout the 4201 school communities, which were mostly concerned that the local school districts, facing their own economic difficulties, would be unable or unwilling to absorb this extra cost and would instead look towards the less expensive option of absorbing the students into their own
schools (personal experience). The researcher, a former speech-language pathologist in one of the “4201 schools” in New York City, witnessed the distress this proposal brought to the communities serving the 4201 students; she also observed the mobilization of school faculty and students, Deaf community activists and local politicians to overturn the proposal through letter writing campaigns, media coverage, and ultimately a rally in Albany attended by close to 1000 people.

While it was recognized that, at least for the foreseeable future, some school districts would provide the tuition for their students to the “4201 schools”, the fear that the high tuition costs combined with the new provision that local school districts would evaluate and make referral recommendations for these students led many to conclude that over-all enrollment at these schools would be reduced. This prospect led many parents and advocates, as well as Deaf1 community leaders, who view these types of schools as central to their culture2, to fear that the “4201 schools” would eventually close due to low enrollment, thus forcing all of their students to attend schools in their local districts that would most likely be ill-prepared to meet their needs (Mowl, 2010; Soloway, 2011; Diaz, 2011; Rivera et al., 2011).

1 The use of capitol “D” in the word Deaf signifies a cultural, rather than pathological, perspective on deafness and refers to those individuals who identify with the Deaf culture through a shared language, history, and value system (Lane et al., 1996).

2 Schools for the Deaf are considered by many in the Deaf community to be centers of Deaf culture and pride in which students can develop their identities as Deaf individuals, use visually-accessible communication, and don’t need to feel “different” because of their hearing abilities, listening technologies, or mode of communication (Lane et al., 1996).
Following protests in Albany and an outpouring of support for the “4201 schools” by state and local politicians, funding for the “4201 schools” was reinstated; however, the direct stream of funding from the state was altered and under the new plan funding is to come from the local school districts, which can then bill the state for reimbursement (Karlin, 2011). Many in the community see this last-minute amendment as a stopgap that will ultimately lead to the demise of the “4201 schools”’ economic capacities for the following reasons: 1) it removes state responsibility for maintaining the existence of these schools should the local school districts be unable to fund them; 2) the local school districts currently struggle with their own budget cuts that may render them unable to make timely or complete payments to the “4201 schools”; and 3) it involved a new “rate setting” system by which the state, not the “4201 schools”, determines the tuition rate for students, despite the fact that the schools know the needs of their students and the costs of those needs best (Kashar, 2011).

Studies show that public schools in New York typically spend two-to-three times as much money per student in special education than they do per student in regular education, ranging from $15,000 to over $45,000 per student annually (compared to a range of approximately $8,000 to $18,000 per student in general education), depending on the school district (New York State Education Department, 2009). Per-pupil funding in the “4201 schools” in the aggregate has been calculated as $59,286 per year, or $76,116 when including summer school tuition (“4201 schools” Association, n.d.). While clearly more expensive than per-pupil funding for special education students in public schools, these increased
expenditures fund services such as transportation, audiology services, assistive listening technology, sign language interpreting, small class sizes (typically a 6:1:1 ratio), and individualized speech and language therapy (personal experience) as well as educational services that are often not provided at such a high quality, low student-to-teacher ratio, or level of expertise in the public schools ("4201 schools" Association, n.d.).

The term "low incidence disability" when referring to severely-to-profoundly deaf students means that in any given local school district there exist relatively few deaf children; even within this small group of students, most are of different ages and function on different skill levels. The per-pupil tuition rate for special education in public schools mentioned above is with respect to students with high incidence disabilities, such as learning disabilities, attention deficit hyperactivity disorder (ADHD) and mild intellectual disabilities, who often do not have dedicated specialized schools that are free of charge, like the "4201 schools." These students typically present themselves to local schools with such high frequency that faculty are usually better equipped, trained, and provided with many of the resources that are necessary to meet their needs. As the term implies, children with "high incidence disabilities" are not only greater in number, but also do not typically require the kinds of additional services needed by 4201 students.

This is not the case with children who are severely-to-profoundly deaf, for whom a "free and appropriate public education" as outlined in the Individuals with Disabilities Education Act (IDEA, 2004) requires a minimum of a low student-teacher ratio, audiological and speech-language therapy services, listening
technology such as digital hearing aids and frequency modulation (FM) systems, sign language interpreters, and additional services for the approximately forty percent who have additional disabilities. Therefore, faced with the burden of weighing the needs of these children against their own fiscal realities, local school districts would have three options: 1) Send their children to “4201 schools” at a great expense to the district taxpayers; 2) to absorb the children into their existing programs; or 3) to send their children to existing inter-district Board of Cooperative Educational Services (BOCES) programs, which are not available in New York City, Rochester or Buffalo.

The literature documents that speech-language pathologists (SLPs) generally report that they have limited experience working with deaf children typical of the 4201 population. At the same time, the American Speech-Language-Hearing Association (ASHA) notes that developments in research and technology have “expanded the range and increased the complexities of clinical activities that are now considered routine aspects” of providing speech and language therapy to severely-to-profoundly deaf children (American Speech-Language-Hearing Association [ASHA], 2001). ASHA, in developing an outline of “minimal competencies” that SLPs working with deaf children should possess, suggests that only those clinicians who possess the clinical skills and training to work with the deaf population are competent to do so. Based on self-reports from non-specialized SLPs who feel ill-prepared to meet the needs of deaf children, the question of who is qualified to serve this population presents itself. It is logical to conclude that SLPs who have spent years working in schools for the deaf with the same population of
severely-to-profoundly deaf children would be qualified to serve them effectively; however this is an assumption that has not yet been tested.

While it may seem prudent that during a time of economic recession and budget deficit, Governor Cuomo would choose to cut the funding for “4201 schools” that reportedly cost the state $109,441,233 in the fiscal year 2010-2011 (“4201 schools” Association, 2011), it does raise a number of ethical and policy questions which this work seeks to answer. Specifically:

- Is it ethical for severely-to-profoundly deaf children to receive speech and language therapy services from professionals who cannot communicate effectively with them and who do not feel qualified themselves to work with this niche population?
- Should public policy be driven by standards of efficiency over standards of excellence and equity?
- How will the tension between efficiency, excellence and equity in education impact the services to which severely-to-profoundly deaf children have access in New York State?

This study’s research questions, which sought the answers through which the above ethical and policy questions will be answered, are outlined in the following section.

**Research Questions**

While it is the assumption of this author that speech language pathologists (SLPs) in the “4201 schools” are the most qualified to work with profoundly deaf children, little research has been done to demonstrate the qualifications of professionals in these center-based programs for deaf students. The intent of this
study is to determine the depth of experience and qualifications of speech language pathologists in the “4201 schools” for the deaf to provide high-quality, appropriate speech and language therapy to the student populations they serve. It will also explore the experiences, skill sets and qualifications of their counterparts in local school districts and BOCES programs for the deaf and hard of hearing.

More specifically, the following research questions will be answered:

1) Do speech-language pathologists working with profoundly deaf students with characteristics typical of those in the “4201 schools” possess a specific skill set?

2) Do speech-language pathologists in the “4201 schools” for the deaf, BOCES programs for the deaf and hard of hearing, and in local school districts possess this same skill set?

3) What are the consequences for profoundly deaf children who receive services from speech-language pathologists who do not possess this skill set?

4) What would be the trade-offs involved in removing profoundly deaf children from their service providers in specialized schools for the deaf in order to be placed on the caseloads of speech-language pathologists in local school districts?
Background Information and Relevant Literature

This chapter will present background information on the “4201 schools” for the deaf and deaf education, in order to broaden the reader’s understanding of the evolution of deaf education in New York State. It will provide a review of the relevant literature about the profession of speech-language pathology changes in technology and federal legislation that have impacted the potential for many deaf children to develop spoken language, as well as an overview of reasons why some deaf children, despite these advances, remain poor candidates for inclusion in public schools. This chapter concludes with a discussion of the values of education, and the tension between educational excellence, equity and efficiency that often drives the decisions of education policy-makers.

History of Educational Settings for Deaf Students

Deaf students did not always have access to an educational setting. In the United States, the first school for educating deaf children was established by three men, Dr. Mason Fitch Cogswell (whose daughter, Alice Cogswell, was deaf), Laurent Clerc and Thomas Hopkins Gallaudet. This school, originally called the American Asylum for the Education of the Deaf and Dumb (now called the American School for the Deaf), was established in October of 1816 following an approval of five thousand dollars of funding by the Connecticut state legislature (Moores, 2001). Following the creation of this school, the New York Institution for the Instruction of the Deaf and Dumb (now called the New York State School for the Deaf) was founded in 1821
with the help of funds from New York State that were designated to support the
education of thirty-two deaf students, thus beginning the long tradition in New York
State of funding private deaf education schools (Moores, 2001). Over the next two
centuries, schools for the deaf continued to open throughout the country.

As in all areas of education, there has been continuous debate since the
beginnings of deaf education in the United States as to the best methodology for
teaching deaf children, often simplified into two “philosophies”: oralism, which
emphasized the teaching of lipreading, and manualism, which emphasized the
teaching of intellectual and linguistic concepts over speech and lipreading skills in
school (Moores, 2001.) Implicit in stating these two contrasting methodologies are
the various skills that each approach aims to develop in deaf students, as well as the
skills each would demand of its professionals. Two “oral” schools, the New York
Institute for Impaired Instruction (now the Lexington School for the Deaf in Queens,
New York) and the Clarke School for the Deaf (now the Clarke Schools for Hearing
and Speech) in Massachusetts, were established in the 1860’s to educate deaf
children through oral communication (Moores, 2001). The goals of these schools
were to give their students access to “literacy, education, and participation in
society” (Marschark, 2006). Again, the New York State legislature supported the
enrollment fees of students attending the oral deaf school (Moores, 2001).

From approximately 1880 through 1967, deaf education in the United States
followed the “oral” model (Marschark, 2006). Sign language was suppressed in
schools and oral communication skills emphasized. At this time, however, advances
were being made in research into the linguistics of American Sign Language, most
notably by William Stokoe, whose conclusions that American Sign Language contained the same linguistic components as spoken languages led to increased acceptance of sign languages in schools (Andrews, Leigh and Weiner, 2004). Variations of sign language-instruction schools, including those using simultaneous English and sign language, bilingual-bicultural English-ASL models, and total communication models (in which any means of communication – including fingerspelling, gesture, writing, speechreading, sign language, et cetera – is used depending on the individual needs of the student) began to emerge (Andrews, Leigh and Weiner 2004).

The 1970’s saw many advances in technology for the deaf. While hearing aid technology improved, it remained difficult for many deaf children to gain sufficient speech intelligibility and auditory skills to be educated in an oral environment (Marschark, 2006). The most groundbreaking technological improvement, however, was about to occur.

The cochlear implant was approved by the Food and Drug Administration for use with deaf individuals in 1984 (Nevins and Chute, 1996). The initial technology, while effective at transmitting sound directly to the auditory nerve for interpretation by the brain, was limited. Because of this, the first cochlear implants were only approved for sale to post-lingually deafened adults (Chute and Nevins, 1996). Developments in cochlear implants since then, however, have led to improvements in spoken language acquisition for many deaf children (Marschark, 2006) as well as increased candidacy for pre-lingually and post-lingually deaf children (Chute and Nevins, 2006). While originally a subject of controversy,
tension surrounding cochlear implants has fallen by the wayside as the incidence of success among its users has been documented (Chute and Nevins, 2006, Marschark and Spencer, 2006). As more children have become successful cochlear implant users and federal legislation has paved the way for inclusion of students with disabilities in the mainstream, regular education programs have begun to experience an increased enrollment of deaf students while enrollment in residential and day school programs for the deaf has begun to decline (Marschark, 2006, Moores, 2009, Smith and Drasgow, 2005).

Opening the Doors to the Mainstream Setting for Deaf Children

There have been two primary factors that have enabled deaf children to participate in educational placements in their local school districts. One factor has been the passage of several pieces of federal legislation that have influenced the trajectory of deaf education. The second has been improved technology that has allowed the majority of deaf children who benefit from it to pursue an education in whatever setting they choose.

Federal legislation. Three pieces of federal legislation have had a resounding effect on deaf education. The most obvious and wide-reaching law is the Individuals with Disabilities Education Act (IDEA, 2004). Among its main principles, IDEA required that all children with disabilities be educated in the “least restrictive environment” possible (IDEA, 2004.) Immediately following passage of IDEA, originally the Education for All Handicapped Children Act (PL 94-142) of 1975, into law, schools for the deaf experienced a decrease in enrollment as parents of deaf
students sought for their inclusion in the general education setting (Marschark, 2002).

A component of IDEA that has specifically targeted the early detection and intervention for children with disabilities is IDEA part C, which guarantees early intervention services to children birth through three years of age who qualify. Under IDEA part C, children who are found to have a hearing loss are entitled to speech-language pathology and audiology services in addition to sign language and cued language services, accompanied by family education, counseling and home visits (IDEA statute, 2004).

A second piece of legislation that has impacted deaf education is Section 504 of the Rehabilitation Act of 1973. “Section 504,” as it is commonly known by education professionals, is an unfunded statute that prohibits the exclusion of any person with a disability from participation in a local school district by institutions that receive federal funding (Rehabilitation Act, 1973). Students are eligible for protection under Section 504 if they have a recognized impairment that affects a major life activity resulting in a “substantial limitation” or their ability to learn (deBettencourt, 2002.) Students who qualify for protection under Section 504 are entitled to accommodations provided by their schools. For deaf children, these accommodations include, but are not limited to, access to FM amplification systems, classroom modifications, note-takers and sign language interpreters.

One final piece of legislation relevant to changes in deaf education has been the Early Hearing Detection and Intervention (EHDI) Act of 2000 (re-authorized by Congress in 2010) (Bodner-Johnon and Sass-Lehrer, 2003). This law promotes
newborn infant hearing screenings in all states and awards grants to states that implement programming to screen newborn children for hearing loss and follow-up with the families of those who do not pass the screening (Moeller, 2000.) These screenings allow for earlier detection of hearing loss, leading to earlier access to amplification and support services such as speech therapy in order for children with hearing loss to have the best chance possible to develop spoken language skills (Andrews, Leigh and Weiner, 2004). Because of increased early intervention, the availability of technology and a continuum of services that enable them to participate in a regular education classroom, and earlier detection through newborn hearing screenings, many more deaf students are able to be educated in the mainstream (Houston, 2010).

**Technological advances.** In order to understand the various options for listening technology, one must possess a basic understanding of the anatomy and physiology of the ear, and types, severities and causes of deafness. The two types of hearing loss are conductive losses, resulting from damage to the outer or middle ear, and sensorineural, resulting from damage to the inner ear or the auditory nerve. Since conductive hearing losses never lead to a hearing loss beyond the moderate range, when we discuss children with severe-to-profound hearing loss, we are referring to those who have a sensorineural hearing loss, typically related to damage to the hair cells of the cochlea, either due to genetic factors, maternal sickness during pregnancy, certain illness like meningitis, or various syndromes that involve deafness (Martin and Clark, 2006).
In the days prior to IDEA, most deaf children received little benefit from amplification. Early hearing aids, which were developed to help World War II veterans with noise-induced hearing loss (Chute and Nevins, 2006) were beneficial to children and adults with mild-to-moderate hearing losses, but did little to improve the listening skills of most severe-to-profoundly deaf students. Hearing aids work by amplifying sounds and sending them into the ear at the amplified level. The amplified sound stimulates the hair cells of the inner ear, not the nerve cell ganglia beneath them. If a severe-to-profound hearing loss is present due to non-existent or “dead” hair cells, providing amplified sound will be futile. Amplified sound will stimulate only those hair cells that remain. While most hearing aid users receive at least some benefit from hearing aids, people with a greater hearing loss will experience reduced clarity of conversation, since low frequency (pitch) vowels may be audible but the higher-pitch consonants, which contain most linguistic information, may remain inaudible (Martin and Clarke, 2006). Students who, after a trial period, do not seem to benefit from hearing aids have another option, due to the remarkable invention of the cochlear implant. Cochlear implant technology bypasses the entire outer and middle ear, converting acoustic energy to electric energy and sending it directly to the auditory nerve (Nevins and Chute, 1996.) The device requires a surgery, during which an internal component containing an electrode array is inserted into the cochlea (Bodner-Johnson and Sass-Lehrer, 2003). The external component is typically worn behind the ear and contains a microphone to pick up sound, and a processor, which analyzes the sound and
determines how to send it to the electrode array. The internal and external components are connected through the skull by magnets.

While often presented to parents of deaf children as an “easy fix” for deafness, cochlear implants in fact are a great investment and require a tremendous commitment to rehabilitation. As Chute and Nevins (2006) write, “Conscious and purposeful spoken language input with high expectations and opportunities for spoken language output set the stage for [spoken] language development.”

Maintenance of the cochlear implant requires regular visits to an audiologist for “MAPping,” a process by which the audiologist adjusts the settings of the cochlear implant so that the sound can be detected by the listener. Families must commit to regular speech therapy sessions and the establishment of an auditorily stimulating environment. The child, as well, must demonstrate commitment to the cochlear implant by wearing it regularly, maintaining its batteries and taking care not to get it wet.

Due to the combined effects of early detection, early intervention and technological advances, the language deficiencies of deaf children can be “reduced or eliminated” to the extent that these children can be successively educated in the mainstream (Andrews et al., 2004).

**Factors that Impede Successful Achievement of Spoken Language and Mainstreaming**

Advances made in early detection, listening technology and service provision may give the illusion that all deaf children can now be educated in the mainstream, in spoken English, and without the concern of additional delays or disabilities.
Unfortunately, there are numerous additional factors that often confound the optimistic prognoses and goals for deaf children. As a result of the factors detailed above, the trend has been for parents to place their deaf children in public schools (Andrews, Leigh and Weiner, 2004). However, the decision-making process regarding the best placement for a deaf child is complex. Deaf children and their families have many options to explore, including residential schools for the deaf, day schools for the deaf, a self-contained classroom for deaf children within a public school, full inclusion in a regular education classroom, an oral school program, a bilingual-bicultural program, a total communication program, and even charter schools for deaf children (Andrews, Leigh and Weiner, 2004.) In New York State, an additional alternative educational placement is available to students with disabilities through the state’s Board of Cooperative Educational Services (BOCES) program. BOCES programs provide an array of collaborative services for deaf and hard of hearing students, including instruction in self-contained classrooms for deaf and hard of hearing students and individual direct instruction sessions with teacher of the deaf; however, the extent of these services varies from region to region, depending on the amount of deaf students present and their needs. The BOCES website states that its services are currently not available to the “Big Five” school districts of New York City, Buffalo, Rochester, Syracuse and Yonkers. This makes BOCES a problematic alternative to the “4201 schools” and an unrealistic option for many of New York State’s deaf children because five of the eight “4201 schools” for the deaf are located in cities that are not members of the BOCES program.
Auditory access and spoken language ability alone are not enough to predict a child’s success in any of these programs. Additional factors must be considered when choosing placement for a deaf child, including: the child’s primary communication mode, intelligence/cognitive functioning, residual hearing, benefit from amplification/listening technology, additional physical, intellectual, behavioral or emotional disabilities, and the family’s home language (Andrews, Leigh and Weiner, 2004).

There has been a long history of “academic underachievement” among deaf students. In fact an often-cited statistics about deaf students relate to the low-literacy rate among this population: that only approximately three percent of deaf eighteen year-olds graduating high school read at a level commensurate with the average for their hearing peers, and that about thirty percent of deaf students graduate from high school functionally illiterate (Marschark, Lang and Albertini, 2002). Indeed, it is widely believed that for deaf students who receive early diagnosis, proper amplification, and intervention services, and who demonstrate minimal gaps between their chronological and linguistic ages, a general education setting will likely yield the best outcomes (Chute and Nevins, 2009). Brackett (1997, p.355) writes that general education classrooms are “stimulating and highly verbal settings” for deaf students with auditory access. Deaf students in mainstream programs have been documented as taking more academically challenging coursework than their peers in schools for the deaf (Marschark et al., 2002). Thus, it stands to reason that parents of deaf students, with federal laws such as IDEA and the No Child Left Behind Act (2000) on their side, would seek out an educational
placement in which their children would have access to the general education curriculum and the expectation to perform well on state standardized tests (Andrews, Leigh and Weiner, 2004).

It has been documented above that the interaction of early detection, listening technology and effective early intervention services can lead to positive outcomes for deaf students in the mainstream. But what happens to those students who do not reap the benefits of these provisions? Regardless of the success that high-functioning, early-diagnosed deaf children have in developing spoken language, there are any number of individuals in the deaf student population that do not fall into this category. While the National Institutes of Health, the Joint Committee on Infant Hearing, the American Academy of Pediatrics and the United States Preventive Services Task Force all endorsed Universal Newborn Hearing Screenings and the timeline of early detection at one month of age, diagnosis at three months of age, and early intervention beginning at six months of age, research shows that there is little uptake on these services. Between ninety-two and ninety-five percent of newborns are screened for hearing loss in the United States (U.S.), but approximately fifty percent of those referred for full evaluations do not follow-up. Only forty-seven percent of those referred for follow-up receive full audiological assessments by three months of age, and greater than one third of those diagnosed with hearing loss do not receive early intervention (ASHA, 2008). Additional considerations involve children who may present with a number of confounding characteristics, including: late arrival to the U.S., home language different from school language, ineffective technology, lack of residual hearing, auditory
deprivation due to late amplification, and additional disabilities (which affect approximately forty percent of deaf children) (Gallaudet Research Institute [GRI], 2011) to name a few (Chute and Nevins, Sass-Lehrer, etc).

The use of a cochlear implant does not ensure that a child will fully develop a spoken language (Andrews, Leigh and Weiner, 2004). Deaf children are required to undergo a lengthy candidacy process in order to determine if implantation is appropriate for their specific skills, needs and backgrounds. Even after careful consideration of all mitigating factors, some children still do not benefit from a cochlear implant (Chute and Nevins, 2006.)

Chute and Nevins (2006), in acknowledging the wide range of performance exhibited by children with cochlear implants, write about a “zone of cochlear implant performance.” They note that the demographics of cochlear implant recipients are changing, and more children are being implanted at younger ages; in addition, more children with secondary and tertiary disabilities are also receiving cochlear implants. This has tremendous implications for the outcomes these children may demonstrate. According to Chute and Nevins (2006), there are two areas within the zone of performance: the physiologic zone and the intervention zone. In either area, a child’s performance with a cochlear implant may fall anywhere on a spectrum between success (defined as the child obtaining auditory skills, spoken language competence, and educational performance similar to hearing peers) and failure (defined as a child’s ultimate unwillingness to use the cochlear implant despite its proper mechanical functioning.) The physiologic zone relates to the child’s anatomical and physiological structure, and how that structure is
predicted to allow for strong outcomes with the cochlear implant. More specifically, expectations for a deaf child's functioning with a cochlear implant are higher if the child has some “neural survival,” meaning available, functioning neural components that can be stimulated by the implant in order to send the auditory message to the brain. Some children have very little neural survival, and unfortunately, survival is very difficult to predict through audiological testing. Thus, potential performance within the physiologic zone is difficult to foresee and ultimately out of the control of professionals and the cochlear implant user.

The intervention zone, on the other hand, relates to several factors that can be predicted by professionals involved in the candidacy process. These factors include: (a) child’s age at implantation, (b) duration of the child’s deafness, (c) the structure of the cochlea, (d) child’s use of residual hearing, (e) child’s use of a formal language, (e) the family’s use of a home language other than the language of instruction, (f) additional disabilities, (g) the structure of the family and its commitment to the aural habilitation process, (h) the expectations of outcomes held by the parents and the child, (i) the educational placement setting, and (j) support services available to the child.

It is generally believed that the later in life a child receives a cochlear implant and the longer that child has gone without auditory stimulation, the less successful that child will be in developing spoken language. While there has been debate over the existence of a critical period of language development, studies conclusively show that the earlier a child is identified with hearing loss and provided with access to sound through amplification, the greater their outcomes for spoken language will be.
(Yoshinaga-Itano, 1996; Moeller, 2000). This holds numerous implications for children not exposed to language in their early years through the use of amplification or a signing system (Houston, 2010). Similarly, if the structure of the cochlea is not sufficient for a proper insertion of the cochlear implant’s electrode array (possibly due to ossification from meningitis or an incomplete cochlea, called a Mondini Defect), the insertion might not be successful. Family components, such as the parents’ commitment to provide a language-rich environment at home, support the child’s auditory and speech development, and maintain expectation in line with the child’s perceived potential, will also impact the child’s success with a cochlear implant. The presence of additional disabilities (which affect forty percent of deaf children), specifically autism, cerebral palsy, mental retardation, deaf-blindness and various syndromes that involve deafness, have also been shown to impact spoken language outcomes in children with cochlear implants. Studies show that some children with multiple disabilities who have cochlear implants make slower progress and reach a lower “plateau” than children whose sole disability is deafness (Waltzman, 2009; Johnson and Wiley, 2009), although this is certainly not true for all cochlear implant users with additional disabilities. An educational setting that does not value or prioritize spoken language may not be conducive to a cochlear implant recipient’s spoken language development. Finally, a deaf child with a cochlear implant needs support services, specifically speech and language therapy, from professionals who are experienced in working with the deaf population and trained to provide the types of services these students need.
In New York State, the eight “4201 schools” for the deaf serve a significant percentage of the deaf student population. According to the State Summary Report of Data from the 2009-2010 Annual Survey of Deaf and Hard of Hearing Children and Youth (GRI, 2011), the following statistics on deaf children in New York State can be reported:

Of 1,509 deaf students reported on in New York State:

- 48.6% are educated in a specialized school for deaf children
- 51.7 percent have a severe-to-profound sensorineural hearing loss.
- 74.3 percent do not use cochlear implants
- 39.1 percent do not use hearing aids
- 37.1% do not use assistive listening devices/FM systems for classroom learning
- 39% have additional disabilities

Therefore, despite overwhelming evidence suggesting that deaf children should easily have access to listening technology and be educated in the mainstream, a large percentage continue to be educated in schools for the deaf. The exact reason for this is not known, but it is plausible that students who don’t use or receive minimal benefit from amplification or have additional disabilities receive more appropriate and accessible educational and support services in schools for the deaf.

**The History of the “4201 schools” for the Deaf**

State funding for deaf education services dates back almost two hundred years. According to the “4201 schools” Association testimony before the fiscal
committees of the New York State legislature (2011), funding for the first private school for the deaf by New York State went to the New York School for the Deaf in White Plains, in 1817. There is evidence that as early as the year 1819, profits from the New York City Lottery were appropriated to funding education for the deaf ("4201 schools" Association, 2011). In 1821, the New York Institution for the Instruction of the Deaf and Dumb was founded with financial support from the state (Moores, 2001). In 1822, the state legislature allotted funds for academic tuition and lodging for “deaf and dumb” students ("4201 schools" Association, 2011.) Thus began a long history of New York State funding for the education of deaf children and specifically private schools upstate and downstate that have come to provide a broad continuum of services for severely to profoundly deaf students. In 1947, state legislators designated certain schools, ultimately known as the “‘4201 schools’,” to provide educational services to students who were deaf, blind, or physically disabled ("4201 schools" Association, n.d.).

The eight “4201 schools” for the deaf and the areas of New York State they serve are:

- The Cleary School for the Deaf in Nesconset, New York (Long Island)
- Lexington School for the Deaf in Queens, New York (New York City)
- Mill Neck Manor School for the Deaf in Mill Neck, New York (Long Island)
- New York School for the Deaf in White Plains, New York (Westchester County)
- Rochester School for the Deaf in Rochester, New York (Upstate)
• St. Francis de Sales School for the Deaf in Brooklyn, New York (New York City)
• St. Joseph’s School for the Deaf in the Bronx, New York (New York City)
• St. Mary’s School for the Deaf in Buffalo, New York (Upstate)

These eight private schools were designated under Section 4201 of New York State Education Law to provide education to the severe-to-profoundly deaf students who attend them. Parents can apply for their children’s admission directly to the schools, or children can be referred to the schools through their local school districts. If deemed appropriate for the individual student, school professionals may recommend placement in the 4201 school following a comprehensive, multi-disciplinary evaluation (“4201 schools” Association, 2011). Upon this recommendation, the Commissioner of Education and the child’s local school district approve placement in the 4201 school, contingent on the availability of an appropriate educational placement in that school (“4201 schools” Association, 2011).

There is disagreement in the per-student cost to the state of “4201 schools”, but figures hover in the range of $75,000 to $90,000 annually, inclusive of summer programs (B. Harvey, personal communication, October 26, 2011; “4201 schools” association, 2011; New York State Education Department [NYSED], 2011). This funding enables the “4201 schools” for the deaf to provide a language-rich environment in which severe-to-profoundly deaf students can communicate freely with their peers, teachers, and therapists without the intrusion of an interpreter, and in which they can receive a continuum of services by professionals who are
familiar with the specific disabilities with which these students present ("4201 schools" Association, 2011). It funds professional development workshops specific to the field of deafness, assistive technology for multiply disabled deaf students who cannot use their hands to sign, and the necessary resources for fulfilling the objectives on each child’s IEP ("4201 schools” Association, 2011; Personal experience.)

The state does not act alone in funding the “4201 schools”. Approximately seventy-five percent of the operating budget for the “4201 schools” for the deaf is funded through the state (B.Harvey, personal communication, October 26, 2011). The remaining twenty-five percent of funding comes from sources such as federal IDEA allocations, Title I funds, and the New York State lottery (NYSED, 2011).

The “4201 schools” for the Deaf Student Population

Due to the locations of the eight state-supported schools for the deaf (New York City, Rochester and Buffalo), these schools cater to a large urban demographic. In the “4201 schools” Association Testimony presentation to the Fiscal Committees of the New York State Legislature hearing on the Fiscal Year 2011-2012 executive budget on February 15, 2011, it was noted that 36.8% of students have multiple disabilities (although deafness remains their primary disability). In addition, the following statistics were cited in an open letter to Governor Cuomo by New York state assemblymen Rivera, Arroyo, Benedetto, Castro, Crespo, and Dinowitz (March, 2011) in opposition to his proposed elimination of funding for the “4201 schools”:

- Statewide, 70% of 4201 students are eligible for free or reduced breakfast and lunch
• Of students at the three schools for the deaf in New York City, over 80% are eligible for free or reduced breakfast and lunch.

• Approximately 70% of the students at “4201 schools” are from minority families (the percentage is higher within New York City)

• Approximately 30% of the students at “4201 schools” are from families that do not speak English at home

From these statistics, we can deduce that the students in New York State’s “4201 schools” for the deaf, in addition to needing access to visual communication and having a low-incidence disability possibly coupled with additional physical or cognitive disabilities, are also among our state’s most economically and socially vulnerable children.

Most of the students at the “4201 schools” use sign language as their primary mode of communication (some, with more severe physical disabilities, utilize communication boards, picture-exchange systems, or other means of alternative communication). Seven of the eight schools characterize their communication philosophy as that of “total communication,” which while not a teaching methodology per se, is typically implemented through a combination of sign language, fingerspelling and visual receptive spoken language (speech and speechreading) (Evans, 1982); one of the schools adheres to the “bilingual” philosophy, which advocates that fluent acquisition of American Sign Language (as a child’s first language) facilitates acquisition of English as a “second” language (Marshark and Clark, 1998). Communication methods at these eight schools include fingerspelling, gesture, writing, sign language, and speaking, although in the total
communication schools it typically involves the use of sign language accompanied by spoken English in order to provide deaf students with a visibly accessible communication mode; at the same time, they are exposed to auditory information and in many programs are expected to attempt spoken communication (Geers et al., 2002). The concurrent use of several communication modes (audition and speechreading with sign language, for example) is called “simultaneous communication” (Evans, 1982.) Both philosophies enable students in the “4201 schools” to, just as their hearing peers do, engage with their classmates, teachers, and school environment in a meaningful way. This involves spontaneously and naturally developing linguistic competence in a first, accessible language (sign language), which can then be used to gain proficiency in the formal academic language of written and/or spoken English (Marschark and Clark, 1993.)

The services these schools provide to their students and families are not limited to those listed on their IEPs. Many of these schools provide extra-curricular activities, such as the Junior National Association for the Deaf and inter-scholastic sports leagues, which offer opportunities for activism, socialization and leadership and might not be available in local schools (“4201 schools” Association, 2011). Supplementary educational services, such as after-school programs, enhance student learning. American Sign Language instruction is available in many schools to assist new signers or students with language delay in acquiring the linguistic skills needed for academic and social purposes. These schools are equipped with social workers, nurses, psychologists and a comprehensive faculty of personnel who are able to communicate with students in their primary mode of communication and
who understand the special needs of students who are deaf (personal experience).

More specific to this paper, most of the speech-language pathologists in these schools are armed with years of experience, strong sign language skills, and a deep knowledge of deafness and its impact on speech, language and listening development. Students in “4201 schools” do not need to worry about their speech-language pathologists’ ability to communicate with them; their parents need not be concerned that they will receive comprehensive evaluations and high-quality intervention. The depth of experience that these professionals have with the unique population of these schools prepares them to provide arguably the best services available to these students.

The Profession of Speech-Language Pathology

Speech-language pathologists are professionals who evaluate, diagnose, and treat a spectrum of disorders related to speech sound production, resonance, voice, fluency, language, cognition, feeding, and swallowing (ASHA, 2007.) Due to variations in certification requirements, not all therapists working with children with speech, language and listening difficulties hold the same licensure. In New York State, professionals who are licensed as “Teacher of Speech and Hearing Handicap” or “Teacher of Students with Speech and Language Disabilities” (TSHH/TSSLD) and work in public or private elementary or secondary schools but are not licensed through the American Speech-Language and Hearing Association (ASHA) qualify for the title of “speech language pathologist” (NYSED, 2011). Many professionals graduating from accredited graduate programs in speech language pathology hold the Certificate of Clinical Competence (CCC) through ASHA, and in
order to practice in New York State schools also need certification through the State Education Department as a “TSHH/TSSLD.” In addition to holding certification through ASHA (2013) and the State Education Department, speech-language pathologists are required to “engage in only those aspects of the profession that are within their competence, considering their level of education, training, and experience” (ASHA Rules of Ethics, section B.) While speech-language therapists who do not hold ASHA certification are exempt from adhering to ASHA’s code of ethics, we can presume that all therapists working with children with speech, language or listening disabilities should adhere to this requirement as well. In New York State, as well as in other parts of the country, speech and language therapists use an array of titles with which to refer to themselves. In a study conducted by Seal, Rossi and Henderson (1998), speech therapists surveyed used the following titles: speech-language pathologist, speech teacher, communication skills specialist, speech-language instructor, and speech-language therapist. Since New York State allows all state-certified speech therapists, both ASHA certified and those who are not, to use the title speech language pathologist (SLP), this term will be used to refer to all therapists and teachers who work exclusively on speech, language, listening and communication goals with students in a school setting.

**Speech-Language Pathologists and Deafness**

Speech-Language Pathologists working with deaf students practice a specialization in the field called aural rehabilitation or aural habilitation. Aural rehabilitation (AR) is defined by ASHA as “services and procedures for facilitating adequate receptive and expressive communication in individuals with auditory
dysfunction” (American Speech-Language-Hearing Association [ASHA], 2001). According to ASHA’s “Knowledge and Skills Required for the Practice of Audiologic/Aural Rehabilitation” (2001), speech language pathologists working within the specialty of aural rehabilitation must demonstrate competency in the following skills: (a) knowledge of auditory system anatomy and physiology; (b) ability to conduct assessment procedures in the client’s preferred mode of communication, which may include sign language; (c) be able to refer for, monitor the use of, and troubleshoot assistive listening devices including hearing aids, cochlear implants, and other prosthetic devices; (d) provide counseling in the client’s preferred mode of communication; (e) develop a plan of intervention that specifically targets the effects of hearing loss, such as speech perception, listening skills, speech-reading, and communication strategies; (f) utilize a variety of communication modes with the client and family, including but not limited to spoken language, sign language, cued speech, the use of augmentative and alternative communication devices, and tactile sign language; and (g) collaborate with other professionals in the field such as audiologists, teachers of the deaf and other members of an interdisciplinary team. Given the depth of knowledge required for this specialization as well as the strong focus on communication skills in a variety of possible modes a client may use, it could be assumed that SLPs who have not committed themselves to obtaining the above-mentioned competencies would not be adequately prepared to work with severely-to-profoundly deaf students, especially those typical of the “4201 schools” for the deaf.
Within the fields of deaf education and aural rehabilitation, speech-language pathologists work with students through a variety of service delivery models. Services can be delivered through the traditional pull-out model, which involves removing the child from the classroom for individualized or group speech therapy with the therapist in a separate room. SLPs can also “push in” to a child’s classroom, thereby working in tandem with the general education or deaf education teacher to target speech, language and auditory goals within the classroom environment. While SLPs often target functional communication goals, such as writing and reading comprehension, that overlap with the general education curriculum, it is not within the SLP’s scope of practice to teach material from the content-related areas. In this way, the work of SLPs with deaf students is somewhat isolated from that of general educators or teachers of the deaf. However, according to ASHA and the Council on Education of the Deaf (CED), the roles and responsibilities of SLPs and teachers of the deaf often overlap, and collaboration between the two professions is critical for maximizing the communicative competence of children who are deaf or hard of hearing, in all types of educational settings (ASHA, 2004b). Therefore, while these two professions involve unique educational backgrounds, certifications, and duties, they also contain opportunities for collaboration on goals, techniques and methods of enhancing the communication skills of deaf and hard of hearing children from birth through age twenty-one.

There is ample data affirming that speech-language therapy, combined with the benefits of early identification of hearing loss and early amplification, has led to positive spoken language outcomes for children with severe-to-profound pre-
linguistic sensorineural hearing loss (Abraham, 1993; Jacoby et al., 2002; Moeller, 2000; Harrison, 2010; Carney and Moeller, 1998). Unfortunately, empirical research suggests that SLPs in public school systems, who by necessity are typically “generalists,” lack the specific knowledge and expertise required for aural rehabilitation (Wilson, 2006; Moores, 2009; Ben–Itzhak et al., 2005; Moseley et al., 1994). Brackett (1997) writes that SLPs in mainstream schools are typically competent in the demands of their profession as they relate to students with typical hearing (who often present with a range of disabilities impacting communication), but lack experience in areas such as assessment of auditory skills and implementing an auditory training program, acting as a resource to classroom teachers regarding classroom acoustics and listening technology, and often appear “overwhelmed” by the extent of the delays children with severe-to-profound hearing loss demonstrate. Houston (2010) cites two surveys of SLPs that revealed that few clinicians reported having any academic exposure or clinical experience with children with hearing loss during their graduate training. Prendergast et al. (2002) comment that in order for students with hearing loss to reap the full benefits of an intervention program, they must work with SLPs who are highly qualified and knowledgeable about deafness and its interaction with speech, language and listening development. However, it has been reported that of SLPs in schools and early intervention sites, very few have professional experience with deaf children (Prendergast et al., 2002). It would seem that in order for SLPs to provide high-quality services to deaf children, they would need knowledge and skills in the technology, communication modes, assessment procedures and intervention protocols that are specific to this population of
students – that is, they would need to be specialists. Most research, however, suggests that this is not the case.

Advances in technology have led to an increased necessity for a specialization in aural rehabilitation. Children who are deaf and hard of hearing require an elaborate array of assistive listening technology, including digital hearing aids, frequency modulation (FM) units and cochlear implants. These devices are continually evolving, making it incumbent upon the speech language pathologist to stay up-to-date on the most recent technological developments, troubleshooting techniques, and training the student, his family, and the student’s classroom teacher how to use the equipment.

While there are many excellent speech language pathologists in schools, most do not have the expertise to work with this complicated equipment; in fact, studies have shown that most speech language pathologists working in schools feel unprepared to work with children with cochlear implants (Iverson, 2005, Watson and Martin, 1999).

The population of children with cochlear implants in public schools is growing (Ben-Itzhak et al., 2005). Yet, in her study assessing the knowledge and skills of speech language pathologists working with children with cochlear implants, Cosby (2009) found that 80% had no graduate-level training in evaluating or providing services to children with cochlear implants. This same study found that of the sample, 60% to 80% reported having very limited knowledge about cochlear implant candidacy, the cochlear implant surgery, and cochlear implant technology including parts of the device, how to troubleshoot problems and how to use the
device. Ben-Itzhak (2009) also found that speech-language pathologists in local schools reported very little perceived knowledge in some areas of cochlear implants and that typically speech-language pathologists’ expectations of their students’ performance with a cochlear implant was tied to their experience with cochlear implants. These limitations become problematic when considering that with a growing deaf student population using cochlear implants, a large part of the responsibilities of speech language pathologists working with deaf children includes counseling parents on the candidacy of a prospective cochlear implant recipient and instructing teachers, caregivers and the children themselves on how to use and troubleshoot these devices. In addition, a speech-language pathologist without prior experience with cochlear implants may hold inappropriately high or low expectations for a student using one, without any background knowledge in the factors linked to various types of outcomes (Chute and Nevins, 2006; Ben-Itzhak et al., 2005). Furthermore, while educational audiologists are a strong resource for speech language pathologists needing assistance with technology, few schools have a full-time audiologist on faculty, as the “4201 schools” for the deaf do (Rosa-Lugo and Allen, 2011)

Communication mode is another factor that will depend heavily on the results of a speech and language evaluation and the informed clinical opinion of the speech language pathologist. The decision to introduce an alternative communication mode, such as sign language or cued speech, to the deaf child and family will be influenced by information gleaned from audiological testing as well as the child’s success in using a visual communication mode, performance on listening
tests, articulation and speech production assessments, and overall language skills. While it may be assumed that children with cochlear implants overwhelmingly use oral communication exclusively for social and academic purposes, studies have shown that this may not be the case. There is increasing evidence that the use of sign language, rather than inhibiting spoken language development, enhances cognitive and linguistic functioning in deaf and hard of hearing students (Hyde and Punch, 2011). According to results from a survey on parents of children with cochlear implants conducted by the Gallaudet University Research Institute in 1997-1998, approximately fifty percent of parents surveyed reported that they use some form of sign language with their children. A study conducted by Hyde and Punch (2011) showed that while parents of children with cochlear implants chose implantation in order to give their children the opportunity to communicate through spoken language, fifteen percent of parents and thirty percent of the implanted children’s teachers reported using sign language to some extent with the children. Therefore, while implantation often seems like a panacea to parents and professionals working with children with hearing loss, research shows that signed communication is often necessary to some extent for academic or social purposes.

Assessment is another area within the speech-language pathology scope of practice. While under the existing protocol the eight “4201 schools” for the deaf conduct their own evaluations, formulate IEP goals and make recommendations for student placement, the possibility of the SLPs inexperienced with deafness in local school districts assuming these responsibilities for profoundly deaf children is concerning. Due to the common expectation that IEP goals and objectives are based
on assessment performance, clinicians are required to perform evaluations of students’ speech, listening, receptive and expressive language, and functional communication skills at least annually, with additional re-evaluations conducted every three years and intake evaluations conducted upon a child’s referral. Interpretation of assessment results becomes problematic, however, when a clinician cannot fully communicate, and thus administer assessments, to a child in his main communication mode. Due to findings quoted above that many deaf students, even those with cochlear implants, continue to benefit from sign language, it is reasonable to conclude that many would need their assessments administered in sign language or a combination of signed and spoken English, in order for the clinician to obtain an accurate reading of their communication skills. However, in their survey on speech language pathologists who work with children with hearing loss, Moseley et al. (1994) found that speech language pathologists surveyed reported that within the category of clinical procedures, they felt least prepared to conduct assessments in the client’s preferred communication mode. Moseley et al. (1994) interpreted this finding as troublesome because an inability to administer testing in a child’s main communication mode can lead to inaccuracies in test interpretation, resulting in inappropriate recommendations, referrals, and federally mandated IEP goals.

For years, professional organizations such as ASHA have advocated for children’s rights to least-biased assessment and evaluation by SLPs who have knowledge and skills in their specialized areas. Inability to conduct evaluations in a student’s primary mode of communication has ethical as well as practical
considerations. When working with students whose primary language or mode of communication is something other than spoken English, SLPs have difficulty conducting informed assessments and gleaning unbiased information about the child from the results (Chabon et al., 2010). Burnette (2000) acknowledged that numerous referrals to special education services are made annually due to poor interpretation of culturally biased assessments that land linguistic and cultural minority students in inappropriate academic placements. According to Title VI of the Civil Rights Act (1964), in order to properly determine whether a student’s language limitations are due to limited English proficiency or disability, evaluators should assess students’ English language skills in addition to the child’s native language skills. For many deaf children, ASL - not spoken English - is the native language, and typically developing deaf students who sign could be inappropriately labeled with a cognitive disability if the evaluating SLP is unable to determine their skills due to a communication barrier (Burnette, 2000). Furthermore, when evaluating the communication skills assessment of deaf students with additional disabilities, inexperienced evaluators risk focusing narrowly on what students cannot do, rather than on what skills they do possess (gesturing, vocalizing, augmentative or alternative communication, eye gaze, etc). Therefore, it is imperative that SLPs performing evaluations on deaf students be familiar with their vast linguistic, cognitive and physical differences and how they may interact to influence performance on standardized assessments.

Yoshinaga-Itano (1997) enumerates the difficulties with conducting a superficial survey of a deaf child’s language skills and argues instead for an
interactionist approach that includes assessment of the following: (a) a student’s successful use of communication strategies; (b) a student’s language performance in regards to syntax, semantics and pragmatics comparative to that of a typically-hearing child the same age; (c) the student’s use of auditory versus visual means of receptive language; (d) the trajectory of the student’s linguistic development; and (e) an analysis of the ways in which the student’s pragmatic, semantic, syntactic and phonological skills interact with each other. It is difficult to imagine an SLP with even intermediate-level sign language skills conducting that form of assessment with a child whose main mode of communication is sign language.

Other areas of the profession include an SLP’s knowledge and skills in auditory training, and in the development of speech production, receptive and expressive language, and functional communication skills. Fortunately, studies have shown that speech-language pathologists generally feel confident in their ability to target speech and language goals with deaf or hard of hearing children (Moseley et al., 1994.) However, there is more to working with deaf and hard of hearing children than is immediately apparent. In Moseley et al.’s (1994) study, the majority of SLPs surveyed reported a lack of knowledge in assistive listening devices and assessment administration, two components of aural rehabilitation that can greatly impact the trajectory of speech and language therapy. For example, unfamiliarity with hearing aids or cochlear implants may result in a clinician spending a disproportionate amount of session time troubleshooting an instrument that has suddenly stopped working.
A dearth of knowledge about cochlear implant mappings can lead to a clinician interpreting a student’s sudden poor speech production as a matter of lack of skills, oral motor dysfunction, or even non-compliance, when in reality it most likely stems from a need for the student’s cochlear implant to be re-mapped. Furthermore, as required by ASHA, counseling is an integral part of the speech-language therapy process, and aural rehabilitation is no exception. Clinicians are expected to provide counseling to students and their families, serve on cochlear implant candidacy teams, assist with the development of compensatory strategies and provide students and their parents with feedback and realistic expectations as to their child’s potential level of communicative functioning. Unfortunately, Moseley et al. (1994) found that additional areas of perceived weaknesses among speech language pathologists regarding work with the deaf or hard of hearing population includes: “ability to guide client to deal with difficult listening situations; ability to develop strategies for independent management; ability to guide client to accept [hearing] loss;” (p.103) and ability to develop and implement programming for parents.

Despite all the evidence suggesting the SLPs as a whole are not qualified to work with profoundly deaf children, there are speech-language pathologists who do have a wealth of background knowledge and experience working with this population. These professionals have managed, through educational and clinical experience, to develop the ability to communicate in a variety of modes (ASL, signed English, cued speech, et cetera), have become familiar with the ways deafness often impacts linguistic and cognitive development, are able to utilize and troubleshoot
assistive listening technology instruments with ease, have the skills to administer and interpret assessments appropriately, and can establish and work effectively toward realistic and individualized goals and objectives for their deaf students. These clinicians most often work at schools or specialized centers for the deaf, where their entire caseload consists of children with severe-to-profound hearing loss. In a survey of SLPs working in schools for the deaf nation-wide, Seal et al. (1998) revealed just that. This study demonstrated that clinicians in schools for the deaf recognize the unique needs of their students, and therefore spend therapy time working not only on speech production but also on the development of their students’ functional communication skills:

Many SLPs at schools for the Deaf devote treatment time to the comprehension of spoken English (speech reading, receptive language, auditory training, and hearing aid usage.) Nearly as many of these SLPs devote time to the development of nonspeech (sic) communication skills, particularly sign language skills, functional literacy skills, and augmentative communication skills in those students who do not demonstrate functional spoken or written English (Seal et al., 1998, p. 279.)

Respondents to this survey reported that their sign language abilities and their experience working with deaf students served as strong qualifications for their work with this low-incidence population (Seal et al., 1998). Contrast this with the findings of Moseley et al. (1994) and Ben-Itzhak et al.'s (2005) findings that most public school-based speech language pathologists feel that their sign language skills and depth of experience working with children with hearing loss are lacking.

According to Principle of Ethics II Rule B of the ASHA Code of Ethics, “Individuals shall engage in only those aspects of the profession that are within their competence, considering their level of education, training, and expertise (ASHA,
While the population of deaf students is small, it is extremely heterogeneous, and SLPs working with this population must possess expertise in the various modes of communication, forms of assistive technology, and range of linguistic competence these children exhibit. Due to the broad scope of practice for which SLPs are prepared at the graduate level and the wide variety of students typically seen in the public schools, it is highly unlikely that SLPs employed by local school districts would have the competence to perform in-depth evaluations, make informed recommendations and provide the skilled level of intervention to deaf students that SLPs in the schools for the deaf do. Therefore, by being placed in public schools, many profoundly deaf students would be deprived of their legal and ethical rights, as outlined by ASHA and IDEA, to receive speech and language therapy from qualified professionals with whom they can communicate without barriers; this could perpetuate inequities by allowing the most vulnerable students to receive sub-standard services, resulting in slower gains and lower outcomes.

**The Values of Education**

According to Hess (2005), education is influenced by the values held by society. A brief review of history demonstrates that to be the case. Over the last fifty years, different priorities in education have shared time in the spotlight as social movements, fiscal concerns and our drive to compete internationally have impacted education policy. These values, frequently discussed as excellence, equity, and efficiency, have driven changes in education policy; however, they have often worked in tension with one another (Hess, 2005).
Under current federal education legislation, excellence is attempted through a system of accountability, results, and sanctions for poor performing schools (NCLB, 2000). State and federal governments measure the excellence of our schools primarily based on their students’ performances on standardized tests that measure their abilities in the core content areas (Kirst and Wirt, 2009). This prioritizing of excellence in academics can be traced back to the 1950’s, when anxiety over our competition with the Soviet Union and the “space race” initiated the National Education Defense Act, which focused on excellence in math and science(Kirst and Wirt, 2009). The publication of A Nation at Risk in 1983 fueled concerns over the ability of our graduates to compete internationally, and paved the way for the standards movement (The National Commission on Excellence in Education, 1983). The Clinton administration in the 1990’s established Goals 2000, which prioritized standards-based education reform for all students, including those with disabilities. The No Child Left Behind Act of 2000, which emphasized standards and accountability for all students, followed. The Obama administration continues to push states to pursue excellence with the Race to the Top initiative, a competitive grants program.

Equity, on the other hand, is defined as making services available to all students who need them in order to achieve excellence (Hess, 2005). Concerns for equity in education, although arguably not addressed to this day, began in the early days of our nation with the common schools movement that aimed to make education accessible to all children (more specifically, however, all white, non-disabled children) (Kaestle, 1983). Equity and excellence worked in concert with the
advent of Title I funding (United States Department of Education [USDOE], 1965) under the Elementary and Secondary Education Act (ESEA, 1965), part of Lyndon B. Johnson’s “War on Poverty,” in order to stave off the negative effects of hunger and poverty on a child’s ability to benefit from a high-quality education. The success of *Brown v. Board of Education* (1954) and the civil rights movement of the 1960’s paved the way for increased equity in education in the later part of the twentieth century as school desegregation was implemented throughout the country.

Following the increased access of previously disenfranchised communities to desegregated educational settings, the political climate in the United States was ripe for a new group of students facing inequity in education – those with disabilities – to obtain equal access to high-quality education for themselves. Currently, the drive both for excellence and equity is seen in the No Child Left Behind Act (2000), currently awaiting re-authorization. This statute requires schools to hold all children, including those with disabilities, up to high content standards, to hire “high quality teachers,” and to be accountable for the learning of their students through performance on standardized tests. Schools are required to use evidence-based teaching methods and programs. Only the one percent of students with the most severe disabilities is exempt from testing and allowed to take alternate assessments instead (USDOE, 2005).

The pursuit of equity at times conflicts with the goals of excellence. Principals pre-occupied with raising their schools’ test scores in order to make adequate yearly progress may be frustrated with the requirement to include students with disabilities, who may perform more poorly on standardized tests, in
their score reports. In addition, the necessity to include more students with more severe disabilities in all aspects of school life may hinder the opportunities of non-disabled students to reach excellence if class time and resources are less available to them in order to meet the needs of students with disabilities.

We can now add financial concerns to the existing tension between equity and excellence. Unfortunately, the pursuit of equity and excellence often requires a great deal of financing. According to Hess (2005), financial efficiency in education is achieved when there are “high levels of student learning with relatively low expenditures of resources.” The Individuals with Disabilities Education Act (2004) notably does not emphasize efficiency; rather, it is a statute that strives for equity and excellence in the education of students with disabilities. There is no “cut-off” of funding under IDEA for the students who are outliers on the severity spectrum of disability. All students with disabilities are served, regardless of their perceived ability to learn. Despite this fact, local education authorities (LEAs) are not fully reimbursed for their special education expenditures; in fact, according to the re-authorization of IDEA (2004), states are granted a maximum of forty percent of their total expenditures for special education (in reality, they are granted far less than that) (ASHA, n.d.) LEAs only receive approximately ten percent of their special education costs from the federal government. While striving for excellence and equity, LEAs are concerned with issues of efficiency that are linked to finances and budgetary concerns; these are ultimately held accountable by district tax payers and prevailing value system of the community.

Educational Equity, Excellence and Efficiency as they Relate to 4201 Students
According to IDEA, all children with disabilities are entitled to a free and appropriate public education (IDEA, 2004). While the terms “free” and “public” are easy to define, the term “appropriate” is often subject to interpretation. There is a lot of jargon that accompanies the term “appropriate setting” where it concerns students with disabilities. The terms inclusion, mainstreaming, and least restrictive environment are often used interchangeably in regard to students with disabilities’ rights to obtain an education with non-disabled peers to the greatest extent possible (Yell, 2012). However, there are distinctions to these terms. Inclusion means that a student with disabilities is entirely educated with non-disabled peers in a regular education classroom, even if this setting might not be the most beneficial for him. Often, advocates for inclusion approach special education from an equity standpoint and feel it is a disabled student’s civil right to be educated alongside his typically developing peers (Carey, 2009). Mainstreaming refers to the inclusion of special education students in regular education settings for all or some periods of the day. For example, in a mainstreaming situation, a deaf student might spend the majority of the day in a self-contained class for deaf students and join the regular education setting for one or two subjects during the day; on the other hand, a mainstreamed deaf student could spend the majority of his school day in the regular education class and be “pulled out” only for English language or mathematics instruction. For many deaf and hard of hearing students, full inclusion or placement in a mainstream program with support services is the most appropriate placement. These children can function well in a regular education environment as perhaps the only deaf child through the use of assistive listening technology or a sign language interpreter.
However, for the students of New York State’s “4201 schools” for the deaf, their current educational placements are indeed the most appropriate ones. As Marschark (2001) noted in his opinion piece for the Democrat and Chronicle, “the lease restrictive environment is not a place that can be determined in advance. It is a diagnostic determination that must be made on an individual basis.” He continues saying “Deaf children are not hearing children who can’t hear,” emphasizing that there are numerous additional factors determining how they will function academically, including the existence of additional disabilities which affect approximately forty percent of deaf students (Gallaudet Research Institute, 2011).

The website of the 4201 Association states the following about the students and professionals of the “4201 schools”:

Students at “4201 schools” receive a rigorous, high quality and inclusive education. Educators at “4201 schools” are experts in their fields... “4201 schools” are not merely an educational option for children with low-incidence disabilities, they are often the most constructive and appropriate learning setting, enabling students to discover, communicate and interact in the least restrictive environment.

Under IDEA, there is a provision for states to continue to make available a “continuum of alternative placements,” educational settings for students for whom a mainstream education is not appropriate (IDEA, 2004). In fact, this provision was included in the original bill because Congress recognized that there are students with disabilities so severe or rare that only education in a specialized setting would be appropriate and beneficial (Yell, 2012). For severe-to-profoundly deaf students, a continuum of alternative placements must be available due to their highly specialized communication and learning needs.
Considering that the primary mode of communication for the majority of students in “4201 schools” is sign language, and that many of them have additional disabilities that would further complicate their education in a general education classroom, the least restrictive environment that is most appropriate for their needs is the specialized schools for the deaf. According to the Office of Special Education and Rehabilitation Services (OSERS), it is incumbent upon the state to establish this continuum of alternative placements if the local school districts are unable to provide them (Yell, 2012.)

This paper began by stating the problem that many profoundly deaf students, if forced into an inappropriate educational placement in their local school districts, would be deprived of high-quality services by speech language pathologists due to a general lack of knowledge and experience by these professionals in the area of deafness. A review of the literature has established that public schools lack SLPs who are qualified to work with profoundly deaf students. It has also demonstrated that when providing services to students, SLPs are under strict ethical and legal obligations to work within their scope of practice and only in areas in which they feel competent and confident. While the values of education – excellence, equity, and efficiency – seldom work in concert, federal legislation clearly demarcates the prioritization of equity above all other values in relation to students with disabilities. Therefore, it is incumbent upon professionals, legislators, and advocates when weighing the trade-offs and considering courses of action for deaf education to be mindful of the need for these students to be seen by competent professionals who have the necessary knowledge and clinical skills to work with
profoundly deaf students. Neglecting to do so will risk an enduring legacy of inequity and poor service provision to this population of high-needs students.

Methodology

Bardach (2009) noted in the literature that in policy research, all sources of information are gathered from either documents or individuals. These individuals include those invested in or affected by public policy decisions, such as stakeholders, informants, and decision-makers. For the purpose of this study, the researcher interviewed three sets of stakeholders: the speech language pathologists (SLPs) in the “4201 schools” for the deaf, SLPs working in BOCES deaf and hard of hearing programs, and the SLPs working in the local school districts that would absorb the 4201 students should their schools close. The supervisors of SLPs who work with deaf children, representing a fourth set of stakeholders, were interviewed when possible.

Research Design

A comparative qualitative study using the structural method of inquiry was employed to investigate the experiences of SLPs working with severe-to-profoundly deaf children. Qualitative inquiry is a viable method of research that has contributed to the development of special education policy and practice for much of its history (Brantlinger
et al., 2005). In their overview of the contributions qualitative research has made to special education for the *Journal of Exceptional Children* (2005), Brantlinger et al. (2005) defined this method of study as “a systematic approach to understanding qualities, or the essential nature, of a phenomenon within a particular context…” that can “…produce science-based evidence that can inform policy and practice in special education.” (p. 195). These same authors argue that qualitative inquiry has allowed professionals in the field of special education to form a deeper understanding of students with disabilities and the services provided to them.

Phenomenological research has been used in educational research to explore and describe the common experiences of a group of individuals (Creswell, 2007). According to Creswell (1998), when conducting phenomenological research, researchers search for an “invariant structure (or essence) or the central underlying meaning..." of the experience being explored (p.52). By using the phenomenological method of inquiry for this study and attending to the “invariant structures” of the participants’ environments, the researcher was able to investigate the lived experiences of clinicians working as speech language pathologists with profoundly deaf children within the contexts of the participants’ work settings.

In addition to interviewing the SLPs, the researcher also conducted interviews with administrators in the “4201 schools”, BOCES programs and local school districts to gather information on their perceived capacity to serve the large number of profoundly deaf children feasibly could enter their programs in the event that “4201 schools” close. Information gleaned from these interviews serves as a supplement to the comparative analysis described above.
Personal Biases

Creswell (2007) notes that qualitative studies allow for the inclusion of an “autobiographical context” (p. 188) that allows researchers to “describe their own experiences with a phenomenon,” thus laying out their biases in order to proceed as impartially as possible with the exploration of the experiences of others (p. 60). The researcher of this study has personal and professional experiences related to the subject matter being explored in this study. Following attainment of her Master’s degree in speech-language pathology from a program in Washington, DC that emphasized the skills and background important for working with the deaf population, she began working at one of the “4201 schools” in New York City. Her own experiences in this school led her to believe that there is a special skill set among the SLPs in these schools that is only attained following years of experience with the high-needs severely-to-profoundly deaf children typical of these schools. Upon learning of Governor Cuomo’s plans to remove funding for “4201 schools” from the state budget, the researcher witnessed the deep concern from children, families, professionals, and the leadership connected to the “4201 schools”. The researcher and her colleagues deeply believed that the specialized skills possessed by professionals in these schools could most likely not be replicated by SLPs in local school districts, and that if forced to attend their local schools the students of the “4201 schools” for the deaf would likely not receive speech-language therapy services from professionals qualified to work with severely-to-profoundly deaf children.

Therefore, it is implicit in the above statements that the researcher views the “4201 schools” as uniquely qualified to meet the needs of the students they serve. However, it must be noted that the researcher’s professional experience is not limited to work in the
“4201 schools.” The researcher has worked with children with hearing loss in a local school district, through early intervention, and in a center-based program that provides listening and spoken language services to children with hearing loss. The researcher also teaches audiology and speech-language pathology to graduate students in a Deaf Education program, and coursework covers all educational options for deaf and hard of hearing children, as well as all methods and philosophies of deaf education. Therefore, while the researcher has a personal and professional history that offers her a unique perspective on the “4201 schools,” she has experience with alternative educational and clinical settings as well.

Nevertheless, great care was taken to limit the infringement of the researcher’s views on data interpretation. For this reason, the researcher chose to triangulate the data in order to cross-check different forms of data, including interview transcripts, the use of a case study and field notes. In addition, interview questions were worded in such a way as to not allow personal researcher biases to penetrate the interviews. Finally, through methods of obtaining reliability (detailed below), the researcher ensured that additional readers agreed with the findings from data analysis.

**Participants**

The researcher recruited three groups of participants – SLPs working in New York State-supported (4201) schools for the deaf, SLPs working for the BOCES deaf and hard of hearing programs, and SLPs working in local school districts throughout New York State - in order to perform a comparative study, in addition to the administrators who supervise many of these therapist. According to Creswell (2007), purposeful sampling is a viable method of participant selection in phenomenological inquiry due to
the inherent necessity that all participants share the common experience of the phenomenon being investigated. Nine speech language pathologists currently employed in the “4201 schools” in New York State were recruited for this study. Two SLPs who work in BOCES programs for deaf and hard of hearing students were recruited for the “BOCES” group. In addition, three SLPs who work in local school districts were recruited for the “local school district (LSD)” group. The small number of participants in the BOCES and LSD groups, relative to the 4201 group, was due to low response from BOCES and LSD therapists. Due to the requirement that participants must have had some degree of experience working with profoundly deaf children, it is possible that the majority of LSD and BOCES therapists in New York State did not meet that requirement, and therefore could not participate in the study. When possible, the researcher interviewed supervisors working with the SLPs who were interviewed for this study.

All SLP participants held either the certification of Teacher of Speech and Hearing Handicapped (TSHH) or Teacher of Students with Speech and Language Disabilities (TSSLD) through the New York State Education Department. Nine participants held the credential of Certificate of Clinical Competence (CCC) through the American Speech-Language and Hearing Association as well. One participant held certification from the American Academy of Audiology as an audiologist. Two participants were certified interpreters for the Deaf. In addition, two therapists reported being certified Teachers of the Deaf.

The mean number of years of experience participants reported having working as speech and language therapists was 16.875; the median was 16. Six therapists reported having six years of experience working with children with hearing loss, and five
therapists reported more than thirty years of experience working with children with hearing loss. Participants reported the following job titles: nine were “Speech Language Pathologists,” one was a “Speech and Language Teacher,” two were “Speech Teachers,” and two were “Teachers of Speech and Hearing Handicaps.” Two participants also reported serving as “Teachers of the Deaf.” Participants reported working with students in a variety of settings, including pull-out, push-in to general education classrooms, push-in to special education classrooms, and push-in to “specials” activities such as art and gym. Many also reported that performing consultations with teachers and other professionals constitutes part of their practice.

**Participant Recruitment**

Purposeful sampling was used to select participants who met pre-determined criteria for inclusion in this study. Criteria for selection of participants was as follows:

- For the “4201” group – participants were currently working for a 4201 school for the deaf in the capacity of speech language pathologist or “speech teacher.”

- For the “BOCES” group – participants were currently working in a BOCES program for deaf and hard of hearing students in the capacity of speech language pathologist or “speech teacher.”

- For the “Local School District” group – participants were currently working in a local school district that would serve students from any of the eight “4201 schools” for the deaf in the capacity of speech language pathologist or “speech teacher” and had worked with at least one profoundly deaf child during their careers.
Participants were recruited via electronic mail (e-mail) sent from the researcher to administrators at the “4201 schools”, BOCES programs for deaf and hard of hearing students, and local school districts that would typically serve 4201 students; administrators were asked to forward the email to the SLPs on their faculty (See Appendix A). Prospective participants were informed of the commitment required for involvement in the study, and were asked to reply directly to the researcher if they were interested. Participants were given a description of the research questions written in a manner intended to preclude possible self-selection or skewing of the results toward SLPs more interested in issues related to deafness. Potential participants were informed that there would be no compensation for participation in this study. Due to the relatively small number of responses, the researcher interviewed all SLPs who responded. A geographically diverse group of SLPs was included, representing the New York City metropolitan area and cities in Western New York State. The researcher communicated individually with these participants through e-mail to schedule interview sessions. Once an interview time had been established with SLPs, the researcher then contacted their supervisors or program administrators to request an interview with them as well.

Setting

Interviews were conducted in the participants’ place of employment, specifically the “4201 schools” for the deaf, BOCES programs and local schools. Interviews took place in private rooms in which the participants were able to speak candidly and safely without anyone else listening. In one case, an interview with an administrator was conducted over the telephone due to scheduling conflicts.

Materials
The researcher used a voice recorder program on both her iPhone and iPad to record interview content. In addition, the researcher used a protocol page that contained interview questions and space for note-taking (see appendix B). The researcher personally transcribed all interviews on her personal laptop computer. For data analysis, highlighters were used to code interview transcripts into themes of common experiences.

**Procedure**

The researcher conducted one-on-one interviews with participants. Upon arriving at the interview site, the researcher obtained written consent from all participants (see appendix C.) Participants also signed a statement of “participants’ rights” (see appendix D). Participants were informed that all of their responses would be kept confidential and that their privacy would be protected. The investigator reviewed the purpose of the study and the amount of time expected to complete the interview, and informed the participants as to how the results of the study would be used. Following this explanation, the investigator signed a statement verifying that she had explained the purpose of the study (see appendix E).

All data collected from interviews remained confidential. Audio and video recordings were saved digitally and stored in a locked drawer in the researcher’s home. Transcripts from interviews were saved in a password-protected document on the researcher’s computer; back-ups were also password-protected and were stored on an external hard drive in a locked drawer in the researcher’s home.
The researcher used a protocol page as described by Creswell (2007) that allowed for note-taking (often referred to as “field notes”) and thought-organization during the interviews and that helped guide the researcher through the interview process. Notes written on the protocol page included thoughts about the school environment and characteristics of the speech therapy room. The following open-ended questions were asked:

- Tell me about your experience working with severe-to-profoundly deaf students.

- What have you learned about this student population by working with them?

- What do you believe to be the minimum standard of excellence for working with this student population as an SLP?

- Tell me about when and how you realized you were skilled at working with this population?

- What can you tell me about working in this capacity with this student population that no one else can?

In addition, all SLPs were presented with a sample case study of a severe-to-profoundly deaf student and were asked to explain to the researcher how they would evaluate, formulate goals, treat, and make recommendations for this student. The case study was as follows:

You receive a referral for a boy named Brandon, who will be on your caseload starting next week. Brandon is a six year-old boy with a severe-to-profound hearing loss who communicates mostly through sign language. He received a cochlear implant at five years of age. With his CI, he detects sound consistently but has difficulty with speech
Brandon’s receptive spoken language improves when he uses his speech-reading skills, although he still depends on sign language for communication. Brandon has been using sign language since beginning a parent-infant program at a school for the deaf at age two. His family speaks only Chinese at home, so his only exposure to spoken English is during the school day. His speech intelligibility is judged to be poor. He produces mostly vowels with a few bilabial consonants in imitation. His only intelligible words are “mama,” “more,” and “up.”

Brandon’s parents want him to improve his spoken language, but they don’t devote time to practicing his speech and listening skills at home. They both work long hours and haven’t had the time to attend speech sessions or meet Brandon’s teachers and therapists. They don’t feel it is a priority for Brandon to use spoken language exclusively.

This case study was followed up with the following questions:

- Given the description of the above student, how would you approach working with him?

- What skills would you need in order to work with him?

- What would you need to do in order to prepare yourself to provide high-quality services to him?

When possible, administrators in all three types of programs were interviewed to provide additional insight and information regarding the program’s capacity to serve profoundly deaf students. They were asked the following questions:
• To what extent are you involved with severely to profoundly deaf students?

• To what extent are you involved with the speech language pathologists who provide direct services to these students?

• What do you believe is your program’s capacity to provide appropriate SLP services to these students?

• Should the “4201 schools” for the deaf close, what would your program’s capacity be to absorb those students into your program and ensure that they receive appropriate services considering their specific needs? (For BOCES and LSD only)

• How prepared do you feel your SLP faculty would be to meet their needs? (For BOCES and LSD only)

• Should the “4201 schools” close, how do you feel transfers to a BOCES or LSD setting would affect the quality of SLP services your students would receive? (For 4201 only)

• How prepared do you feel your SLP faculty is to meet the needs of your students? (For 4201 only)

**Data Collection**

Three forms of data were collected from each participant. First, each participant completed a survey for the collection of demographic information related to their professional credentials, level of education and years of experience (see appendix F.) Second, data were collected using audio recordings (using the researcher’s iPhone and
iPad voice recording devices) in order to obtain as much information from each interview as possible. Third, all participants gave a verbal response to the above case study that was recorded on the iPad and iPhone recording devices, and was subsequently transcribed by the researcher.

**Data Analysis**

There were separate analyses for the interview and case study transcripts. The researcher performed within-group analyses (comparing data between case studies, interviews and field notes within each participant group) and between-group analyses (comparing all data between the “4201,” “BOCES” and “LSD” groups.) Within-group analyses were performed in order to triangulate data. Upon beginning data analysis, the researcher read each transcript no fewer than three times. Over the course of multiple readings, statements of significance emerged from each transcript. It was found, after multiple readings of all transcripts, that transcripts shared many common themes, represented by these emerging statements of significance. Statements determined to convey similar themes were coded in a uniform color, thus creating “categories.” These categories each received a label; all statements across transcripts that the researcher felt belonged in an individual category were then “coded” in that color. Interviews and case study transcripts shared some, but not all, categories; several new categories emerged during analysis of case study transcripts that had not been present in interview transcripts. In addition, analysis of transcripts of interviews with administrators yielded several new categories.

Data were analyzed through the “constant comparative” method detailed by Creswell (2007). Through constant comparison, the researcher continuously analyzed all
pieces of text according to that which she has already included in the categories she has identified. By constantly revising and modifying emergent categories to ensure that all examples of text included in them belong, attained the goal of accounting for as much text as possible. The emergence of categories through coding is an inductive process. Following the emergence and labeling of all categories, the researcher used these categories to draw conclusions about the experiences of the participants.

All pieces of text were coded. Portions of text were omitted that contained the following:

- Ambiguous/vague/unclear statements
- Incomplete statements, as represented in the transcript by “…” or an unresolved thought
- Statements that are judged to be extraneous or irrelevant to the subject matter
- Statements that rephrase the interviewer’s question or ask a hypothetical questions
- Statements that refer to non-deaf children that are judged to be irrelevant
- Statements that refer to past experiences that are judged to be irrelevant
- Statements that refer to job responsibilities that are not related to speech therapy (e.g. working on various assistive technology devices aside from those used with children with hearing loss, providing Teacher of the Deaf services)
- No interjections were considered unless they were judged to be significant by the researcher
- No less than 90% of text presented intelligibly and in complete sentences was used
The most illustrative statements within each emergent category were used descriptively when reporting results. In addition, criteria were established that allowed the researcher to parse pieces of text into coherent “chunks” of information. These criteria are outlined below, separately for the interview responses and case study responses.

**Reliability**

In order to establish reliability, two “auditors” were employed to read the interview and case study transcripts no fewer than three times each. Using the criteria that the researcher outlined above, these auditors independently determined the following:

- Whether or not they agree with the researcher’s chunking of significant statements

- Whether or not the researcher’s criteria was followed in the choosing of significant statements and the development of categories

- Whether or not the coding of chunks into categories by the researcher is appropriate according to the established criteria

The auditors were instructed to familiarize themselves with the criteria after reading each transcript three times. They were then instructed to compare the criteria to the researcher’s coding of transcripts and to determine if the words, sentences and phrases highlighted were done so correctly, based on the established criteria. If the auditors were in agreement with the researcher’s coding of a section, it was left alone. If they disagreed with the way a piece of text was coded, they were instructed to put a star
(*) next to that section and on a separate page, explain why they disagreed and to suggest an alternate way of coding it that was more appropriate, in accordance with the established criteria. If the auditors agreed with a coding of a piece of text, but felt it was not represented by the criteria listed underneath its category, they were instructed to circle the section and to suggest on a separate page a new criteria to properly represent the sentiments expressed in that section.

There were several areas of disagreement between the researcher and the auditors. Auditors felt that in some instances, the researcher had inappropriately categorized quotes. When this occurred, the auditors explained their rationale and a negotiation of the best way to categorize the quote, according to the established criteria, ensued. Depending on the outcomes of these negotiations, the quotes were either re-categorized or left in their original categorization. Ultimately, and agreement of more than 90% was achieved.
Results

“There is no such thing as the purely deaf child anymore.”

This chapter is divided into four sections. The first section refreshes the reader’s memory as to the nature of the study and the research questions being asked. The second section presents the data through themes that emerged through analysis of interviews and case study responses. For the convenience of the reader, tables summarizing pieces of verbal text that most epitomize the emergent themes appear toward the end of the second section. The third section will directly respond to the empirical research questions. Finally, the fourth section will describe an unexpected outcome of the study, which emerged through the process of interviews and data analysis.

Section 1: Review of Methodology

The researcher conducted a comparative qualitative study utilizing the phenomenological method of inquiry to answer four research questions. The first two are empirical questions, which will be answered in this chapter through
reporting of the data. The second two questions, which are policy-orientated questions, will be answered in Chapter V taking into account the empirical results discussed in this chapter. The four research questions this study sought to answer were:

1) Do speech-language pathologists (SPLs) working with profoundly deaf students with characteristics typical of those in the “4201 schools” possess a specific skill set?

2) Do speech-language pathologists in the Board of Cooperative Educational Services (BOCES) deaf and hard of hearing programs, and in local school districts possess this same skill set?

3) What are the consequences for profoundly deaf children who receive services from speech-language pathologists who do not possess this skill set?

4) What would be the trade-offs involved in removing profoundly deaf children from their service providers in specialized schools for the deaf in order to be placed on the caseloads of speech-language pathologists in BOCES or local school districts?

Fourteen speech-language pathologists from the New York City Metropolitan area and Western New York (nine from five different “4201 schools”, three from differing local school districts and two from differing BOCES programs), with various levels of experience with severely to profoundly deaf children, were interviewed for this study and provided responses to a sample case study. In addition, eight administrators from each of these educational programs were interviewed regarding their program's or school's capacity to provide high quality
speech and language services to their deaf students. Following transcription of interviews, the researcher analyzed the transcripts, coding for common themes that emerged. Reliability was ensured through the use of two “auditors” who independently determined whether or not the researcher’s coding followed criteria she had established. A 90% agreement was achieved between the researcher and auditors.

Section 2: Emergent Themes

Following the completion of interviews, the researcher collected three main sets of data: interview transcripts from speech-language pathologists, case study transcripts from speech-language pathologists and interview transcripts from school and program administrators. This section presents the results of the analysis of these three data sets in the form of “emergent themes” – those themes that surfaced as commonalities among the participants who were interviewed. Themes that arose through interviews with SLPs, with administrators, and through case study responses will be presented separate from one another and will be supported with direct quotations from participants.

Emergent themes: speech-language pathologists. Data analysis as discussed in Chapter III of this manuscript revealed the emergence of six thematic categories of responses: (1) description of the school or program; (2) sense of self as a professional, including training, background, strengths, weaknesses, and perceived skill set; (3) description of job, including its accompanying frustrations; (4) characteristics of students and families in school/program; (5) references to outside
entities; and (6) changes in the field that have occurred over time. These themes reflected the overall experiences that participants had working with severely-to-profoundly deaf children over the course of their careers.

As the researcher anticipated, there were differences in responses between the three groups (4201, BOCES and LSD) investigated. However, it should be noted that within each group, in more than one category, there was variance among responses that crossed the three types of educational settings. This variance was seen in The 4201 group displayed the most homogeneity, which might follow logically given the commonalities (student characteristics, language of instruction, and history) among this family of schools that were laid out in Chapter I. Both the LSD and BOCES groups demonstrated greater within-group variance, which will be discussed throughout this chapter.

**Category 1: description of school or program.** Participants discussed many of the characteristics of their school or program, including communication philosophy and accessibility, classroom placement options, and the supports available to faculty who work there. Therapists working in “4201 schools” discussed the benefit to students of having accessible communication and a communication philosophy that values the communication modes and abilities of all students, as well as giving the students exposure to Deaf role models. The following quotes demonstrate the therapists’ beliefs that accessible communication benefits the students academically and socially. A speech therapist at one of the “4201 schools” for the deaf reflected on her school’s choice of communication philosophy:

> We use the “Bilingual approach” [ASL and English]. For academics, the kids, the majority of their instruction is through ASL so everybody has clear access
to instruction in the classrooms. And then they might be pulled or separated for different activities for spoken English...

This school’s decision to use a bilingual approach to communication reflects its communitarian philosophy, in that all students are taught in the one language that is accessible to all, regardless of the fact that it might limit the exposure that those students with more auditory access have to spoken English. In bilingual schools for deaf children, ASL is the language of instruction (as well as often the language of socialization) and written English is taught through ASL (Drasgow, 1998.) Although this was the only school in the study that uses a bilingual approach, the communitarian ideology reflected in the choice of sign language as the primary mode of communication is prevalent in all of the “4201 schools”, as even those utilizing “total communication” reported that sign language is used in all situations, and by all members of the school community, throughout the school day.

A therapist at another 4201 school spoke of the advantage of accessible communication, though she also described social benefits:

The best thing, though, about having a school like this is they have peers, they can talk to everybody, all the staff knows sign language, even the housekeeping staff knows some basic signs – so this is a place where they want to be all the time. To have peers they can communicate with.

This same therapist discussed how the culture of the school empowers its students to develop a strong identity, and that the culture ensures that all children’s communication needs are met:

I think there is a strong feeling now toward recognizing Deaf culture, recognizing the Deaf community, bringing in speakers who are Deaf to teach us and the parents how to read to the children, for example, and I think that’s helped a lot. So they see Deaf adults doing things, how successful that can be.
At another 4201 school, a therapist emphasized that the ability for all students to communicate equally and freely is valued:

[The children] can sign and communicate freely knowing that we will be able to sign and communicate back to them. So here, they can communicate, they can sign so many things and we all understand what they are talking about. It's a total communication approach.

The BOCES and Local School District therapists addressed issues of communication less frequently than did the 4201 therapists, possibly due to the lack of visually accessible communication in their settings. Below, a therapist in a BOCES program that does not provide self-contained classes for deaf students describes the communication modality used with his students. It should be noted that this therapist stated that his program sees very few children with hearing loss and that the majority of his student population is children with severe intellectual and physical disabilities.

The students who are in any of the programs here are always in a Total Communication type of program, so signing is a lot of the work that we do but [that is the case] with our severely impaired speech students (not hearing-impaired), we use sign, we use Picture Exchange Communication System with students if that's what we have to do and an auditory type of system.

This therapist's quote demonstrates that professionals in his program are equipped to meet the communication needs of all students, which may include sign language but also a more "concrete system", such as using the exchange of pictures, to communicate ideas. A therapist at another BOCES program, this one with a self-contained classroom option for deaf students, reiterated this point, emphasizing the importance of faculty being amenable to using a variety of communication modes with deaf students:
They have a right to communicate, we as therapists just have to find other avenues and hopefully be in a program where other avenues are welcome... just being open to using a variety of communication approaches because that is going to benefit the student.

While both BOCES programs reportedly have the capacity to provide speech and language services with some degree of sign language support, the students and faculty within the larger school buildings in which they exist only use spoken English. The same is true of the local school districts that serve deaf and hard of hearing children. While one large, urban school district offers self-contained, total communication classes for deaf children, these classes are housed within schools in which spoken English is the primary mode of communication. A therapist in one of this district’s self-contained programs shared that eight students in her program have little-to-no interaction with the remainder of their school’s student body. Her example paints a picture of the deaf students in this school as an insular, isolated minority within the larger “hearing” student majority:

They do [have some interaction with other students] at lunchtime, maybe, and on the playground, but they don’t really interact with the other kids because they can’t communicate with them.

It is possible that the reason communication mode was not addressed by the therapists in the other two school districts (one large and urban, one suburban) is that students attending these schools have such strong spoken language skills that supplementing with visual communication is unnecessary. Therefore, the emphasis that therapists put on their program’s communication accessibility probably is a function of the mode of communication their students use and the type of accessibility they need.
Many therapists discussed a wide variety of educational placements available in their schools or programs. At one 4201 school, a speech therapist discussed the spectrum of opportunities available to students, ranging from parent-infant programs and an auditory-oral preschool through classes conducted through a mixture of spoken language and sign support and full ASL-instruction classes:

We have an oral preschool program, three to five years of age. Now some of the children go through the parent infant program when they’re babies, which consists of two special education teachers and two speech language pathologists. I have one student who is in an auditory and sign-support class. Then I have another student who is profoundly deaf and in an ASL-only class.

A speech therapist at another 4201 school that offers its students the opportunity to fully or partially mainstream described the placements available to her students:

In this building, they are fully mainstreamed, the middle school is across the street. So if they are middle school age they go across the street. We provide interpreters for all their classes and also resource room if they need that as a support for their mainstream classes. So if they have no learning disability, this is the very least restrictive environment. Then, if they have poor English skills, they might come to our [self-contained] English class, you know we have an English teacher here who is fluent in sign language, so they might come here for English, be mainstreamed for math and some other classes, so we’re flexible in that. We also have kids who are completely self-contained, and you know they are mainstreamed for gym and lunch and maybe an art class.

Another 4201 therapist at a different school discussed the continuum of options available at her school and how it benefited a particular student:

We had one girl who was in a dual language classroom, it was primarily auditory oral but it did have some sign language support, and then she’s been making great progress and new types of kids were coming into the class and she really needed different types of models – younger kids were coming in. And they just moved her to an auditory oral class, so I thought that was really great and she’s doing really well.
A therapist at a BOCES program discussed that her program offers deaf and hard of hearing children the opportunity to benefit from support services and a program that supports Deaf culture and identity while being included in a mainstream school environment:

Our kids have the opportunity to get the resource room, the one-on-one, and they get to be included in a mainstream situation as well. Right now, one of our interpreters is teaching the entire school the Pledge of Allegiance in sign language. It’s the least restrictive environment with support.

The range of services reportedly offered by local school district again demonstrated that districts differ in what kinds of programs are available to their deaf students. For example, one large urban school district shared that while she worked only with students in a self-contained total communication classroom for the deaf, her larger school district offered a range of opportunities, from auditory-oral classrooms for the deaf to placement in the mainstream with support from itinerant teachers of the deaf and speech therapy. The following quote is from her supervisor, who manages the speech language pathologists who work with deaf students in this district:

With [our district], we have the self-contained classes for the children who are deaf and hard of hearing and need that level of support. But the majority of the deaf and hard of hearing students go to regular education or less restrictive settings, and if needed there are also 12:1 ratio classes and that’s special education, they’re self-contained, but they are in the general education.

The therapists from the other two district settings did not report a range of services and settings for deaf children in particular, although both described alternatives for children who need special education services, such as special education self-contained classes with opportunities for partial mainstreaming.
However, they both admitted that a deaf child would most likely be the only child with that disability in these classes. Neither district offered self-contained classes for the deaf, with the only option for a deaf child being mainstreaming with an itinerant teacher of the deaf or placement in a special education classroom. As one therapist from a district reported:

In this geographic area...[a deaf child would be] mainstreamed with a teacher of the deaf as a support person.

Many therapists discussed the benefit to them of having a system of supports available, including the availability of mentors, the ability to collaborate with classroom teachers, and opportunities for continuing education and professional development. A therapist at a 4201 school discussed her school’s mentoring program:

Here, you're given a mentor for a year. And so you're able to work with that mentor who will come answer any questions you have. Any problems, any difficulties you may have, that person is there to answer your questions and to help you along. I had someone, someone with a lot of experience by my side if I had questions about aural rehab.

A therapist at a 4201 school discussed the benefits to teacher-therapist collaboration at a center-based program:

The classroom teachers are all teachers of the deaf. They know language, they know speech, they know listening. And they use us as guides. They tell us their new unit, they tell us what they’re going to be doing, so we can integrate that into the speech room. If they’ve got a really good book that they’ve been using ASL with, they’ll send it with us so we can do the spoken English aspect of it in our rooms. And then if the child is working on a goal, I’ll go in and say “Can you just work on this?” And they [the teachers] can carry it over throughout the day to work on it. There’s huge teamwork in this building.
A speech therapist at a 4201 school, who had little past experience with deafness and sign language, mentioned that her school offered sign language classes to both faculty and people in the community:

They have twice a week sign language classes, and they open it up to the community. So if [a therapist is] not as proficient as the group is here – you come to the sign language classes and they’re taught by some of the teachers here. So that supported me in advancing my skills to better work with this population.

A speech therapist in a local school district, who has had limited experience with deaf children, discussed the support her district had given her in order to prepare her to meet the needs of a deaf student on her caseload:

At the beginning, I really didn’t know how to do this [provide services to a profoundly deaf child]. So the district paid for a private speech language pathologist who was also a teacher of the deaf to come in, to explain how to use the FM system, not only the FM but also the cochlear implants and how to troubleshoot because at the beginning this was sort of foreign to me. And so I had her expertise. And now I’m really able to troubleshoot so that is great. But having the support of this person, and having the support of the district to pay her per diem services, they also had her come in that first year to speak to us as a staff to just explain in general what you can expect from a profoundly deaf child, what to do with cochlear implants, any special situations, we had her service for that first year.

A between-groups comparison revealed that the three types of educational placements investigated for this study offer dramatically different opportunities for their student body and faculty. However, it seems that the opportunities and types of programming available may be a function of the student body within each academic program. For example, the “4201 schools”, which have historically drawn deaf children from Deaf families and increasingly now attract deaf students who have been unsuccessful in auditory-based programs and those with multiple
disabilities, presented as the most egalitarian, inclusive and accommodating programs, from an anthropological perspective and philosophy of Deaf culture, by providing both accessible communication to all students, access to deaf role models, validation of students’ identities as Deaf individuals, a spectrum of academic placements for students, and support and collaborative experiences for faculty. Of the two BOCES programs that had participants in this study, only one offered the kind of modifications and the extensive services that were available in the "4201 schools" (sign language interpreting, self-contained classes for the deaf, opportunities for full or partial mainstreaming, and an array of support services.) The other BOCES program did not offer many options for children with hearing loss, with the therapist reporting that for most of the deaf or hard of hearing children served by that program, the hearing loss is not their primary disability. Similarly, the professionals interviewed from three separate school districts (two large and urban, one suburban) reported very different options available to deaf students. Only one of these districts offered self-contained classes with sign language as the primary language of instruction. The other two districts had support services in place to assist children with hearing loss in the classroom, but did not present with the resources to teach children whose primary mode of communication is sign language. In addition, the supports available to faculty differed from the local school district programs to the “4201 schools”. Whereas the faculty in “4201 schools” reported the ability to work together in cohorts, the SLPs in local school districts reported working more independently and having less time and resources for collaboration. However, therapists across the three types of programs reported
receiving professional development opportunities to supplement their knowledge of hearing loss and aural rehabilitation, suggesting that the administrations in all of these programs are aware of the uniqueness of this low incidence population and the necessity for continuing education.

Also of note was the “cultural” and “communal” aspect of deafness that was prevalent within the “4201 schools” and one BOCES program, but not within the other BOCES program or any of the LSD programs. As the therapist from a BOCES program shared:

We are a culture within a culture within a culture. We are our own community....Last year, we started our own once-a-week Deaf Awareness Lunchtime with the students...oral [students] and signers had to come together and socialize with each other. They got to speak with Deaf adults and former students.

This contrasted sharply with a description by a therapist in a large local school district:

They’re the only “hearing impaired” classroom. I don’t want to say there’s not a lot of support here [in the larger school building] for them, but they’re just kind of the only classroom, so they’re not the focal point of the school...They’re “the hearing impaired class.” And only the people that work with them work with them.

**Category 2: job description.** All therapists provided a description of their job, including day-to-day responsibilities, methods of conducting therapy and evaluations, and their breadth of clinical practice. Due to the fact that all therapists are, by trade, speech pathologists, they shared many similar job descriptions. However, there were some differences between groups that are examined below. All therapists also discussed various frustrations they find with their jobs.
Therapists discussed the following areas of clinical practice that they engage in daily with their deaf students: troubleshooting listening devices, engaging in therapy “rituals,” such as daily listening checks and the Ling 6 Sound Test, phonemic awareness, auditory training, articulation, literacy, receptive and expressive communication in both spoken English and sign language, pragmatics, augmentative communication, developing materials, counseling parents and children, modifying tests and materials to meet the unique needs of students, and report writing. Several therapists also mentioned non-clinical responsibilities, such as filling out Medicaid paperwork and providing social and personal counseling to their students.

Therapists in “4201 schools” described the widest range of clinical practice with deaf students, including targeting auditory goals, functional communication such as reading, writing, speech reading and augmentative communication, and sign language. They reported on a variety of goals for their students, from mastering listening and spoken language in order to be mainstreamed to developing functional spoken English skills for activities of daily life. The following quotations demonstrate this scope of clinical practice.

A therapist who works with partially-mainstreamed middle and high school students discussed the clinical objectives she approaches with her students:

If you have a [high functioning] child with a cochlear implant, well that’s gonna be all articulation and auditory skills. Or do you have a profoundly deaf mentally challenged child with whom you’re gonna have to be working on social skills and pragmatics and language and vocabulary skills and basic communication skills? What do you write if your bus is late and you come back in and need to find someone to get you a late bus? Basic life skills kind of communication needs.
Another therapist who works with pre-school students described the breadth of her responsibilities:

I do a listening check every session to check their frequency access. We do the Ling sounds every session. I need to make sure their CI or hearing aids are functioning....For auditory training, I use the SPICE (Speech Perception Instructional Curriculum and Evaluation) and the WASP (Word Association for Syllable Perception)...I have one child who does not wear any amplification, and with him it's speechreading, using his voice for alerting.

Both quotes give the reader an understanding of the breadth of responsibility of therapists in the “4201 schools”. Because students at “4201 schools” come from a variety of backgrounds (from both Deaf and hearing families), they can present with additional disabilities, and may fall anywhere on the communication spectrum (ranging from using only ASL to being primarily auditory learners). As a result, therapists in these schools must routinely adjust their clinical methods to meet the unique needs of any given student. This is not true of therapists in most local school districts and BOCES programs, since these environments tend to be attended by higher-functioning deaf students who use listening and spoken language to learn and communicate. Indeed, therapists working in local school districts described a scope of practice with their deaf students more limited than those at the “4201 schools”. The exception was the therapist in a large urban school district, whose description of her students matched descriptions of students in "4201 schools". This therapist, who works with students in a self-contained classroom for the deaf within a public school, reported targeting mostly functional communication skills:

I’m working on their ability to understand written words, so reading comprehension, answering “wh” questions both in written form and verbal form, like if they can understand when I say “What” or “When,” do they need a sign prompt? We’re working on them being able to advocate for themselves, so even if they have no verbal language, that they can say “Help”
or something, so they’re able to communicate in the outside world, so they’re not so lost.

In contrast, the therapist who has one bilaterally cochlear-implanted child in a suburban district reported the following therapy activities that target higher-level skills:

We work on auditory memory, processing of information, how to get him to express what he wants (in spoken language) if he’s having trouble but he’s internally understanding it... making sure he can generalize information to other environments.

Analysis of job description as a function of skill set revealed that there was a relationship between therapists’ skills and how they perceive their job descriptions. For example, therapists who felt they had a strong command of American Sign Language discussed their application of that knowledge to working to improve their students’ linguistic competence in ASL and English. One therapist at a 4201 school, who reported having years of sign language experience, discussed her use of that skill with her students:

\[I'm \text{ working with kids in this building on plurals. Four and five year olds, they're ready for plurals. They're ready developmentally for it, so we're gonna go for it. And they'll say "two cat." And I'll say, "yes, you're right. Now when we have one cat, we write }\text{ c-a-t. When we have two cats, we write }\text{ c-a-t-s.} \text{ And I fingerspell C-A-T-S. I don't just sign "CAT" and add the "s." "S" isn't a separate element, so you can't give it equal weight. You need to know if the child has it in his language, so you can show them how to move it over to the other language.}\]

Another therapist in a school for the deaf spoke of how she incorporates her sign language knowledge

\[I \text{ work on a lot of vocabulary, but in working on the vocabulary, I can't do it in English, I have to break it down to sign. That becomes the whole interpretation of the word – word recognition and the written English to the}\]
ASL, to the sign. And then you get into the phrase and sentence level, then paragraph level and comprehension.

Another therapist described how her knowledge of ASL enables her to conduct least-biased assessment with her students:

I think knowledge of how to evaluate these kids is really important...knowing how to adapt tests for them, to have the flexibility to do that. A lot of times I’ll do that but I already know if something is appropriate or not. Like in some cases, like when using the Preschool Language Scale, I might sign a test item that I know they’re not gonna get from auditory input, but I’ll word it in my report so that it reflects that. And I know when something is an appropriate sign to use or if they’re just getting the meaning because it’s iconic and they can really figure it out from the sign.

A therapist at a 4201 school discussed how her background in troubleshooting assistive listening equipment enhances her work with her students:

I think I have a good background in amplification devices, so I have the knowledge to do basic troubleshooting, what to look for, and all the speech therapists in the preschool do daily listening checks and we can figure out what to do if the device isn’t working. In graduate school, we had a whole course on cochlear implants so I know about all the parts, how to take it apart, how to troubleshoot...

A therapist in the local school district discussed that one of her job responsibilities is serving as a resource to her deaf student’s parents and the faculty at her school. While this would be true of therapists in all settings, it is possible that without a critical mass of deaf students in a district, the duty to educate school faculty and provide support to this family fell more squarely on her shoulders, rather than being shared by the entire school community (as it would at a school for the deaf.) Below, this therapist shares how gaining experience with assistive listening technology and becoming more familiar with her student’s unique needs helped her to fulfill that role:
At the beginning, I really didn’t know how to do this...And now I’m really able to troubleshoot so that is great. I think the most interesting part that I’ve learned is....how a normal hearing child or a child with a mild hearing loss really gets information from everything going on around them, and I just always have to remind myself and his teachers, like I call it “the ten foot bubble,” that if something is happening past that, very likely he isn’t getting that information. I think that’s what I’ve really had to impart to the staff, that it’s not that he wasn’t listening, it’s not that he isn’t staying focused, it’s just a very different learning style. I think I’m also a really good resource for the parents, because I’m their liaison. His teacher will email me, “[Name], please come down, the light’s [on his speech processor] is turning red, something’s happening.” And his parents utilize me not just for the academics but for the social piece, there were some bus issues so I would go on the bus. Then there were some issues at recess that they felt were not being addressed properly by the monitors, so I spoke with the monitors how to best handle it.

Another local school district therapist, who is also certified as an audiologist, reported that he draws upon his strong background in audiology and assistive listening technology to fulfill is job responsibilities:

For me, as an audiologist, it's understanding the physical limitations. Most speech therapists can’t read an audiogram. I start with that...the things you need to think about everyday, like “Is the hearing aid working?” If you are assuming that the technology on the child is operational, don’t. You can’t. If the technology isn’t working, you’re wasting your time. The kid will sit there with dead batteries. So the routine you need to start with is, “Is the system working?” Going through your sound checks, you know, go through the frequencies of the speech range. Can you hear that? Can you repeat it? OK, now I’ve got the frequency range I need.

A 4201 therapist shared how she utilized her background knowledge of auditory deprivation when determining therapy activities for her students:

I have a student who came from El Salvador, a little bit older, and then he got hearing aids, so you know the whole deal that his synapses matured and they gave him the hearing aids and they didn’t do anything for him. So now he’s fourteen years old and has decided not to wear them. So he comes and I work on a lot of written English, vocabulary, multiple meaning words, synonyms, reading a paragraph and answering questions. Because I’m not gonna sit there doing auditory training with him, it’s not gonna work.
Therapists who reported having extensive experience with deafness felt they were able to apply that experience and knowledge base in order to appropriately modify evaluation or therapy materials. One therapist at a 4201 school, with reportedly thirty-three years of experience with deaf students, discussed how she routinely modifies her lessons and activities depending on the needs of her students:

I think I’m really skilled at…it’s teacher-directed but it’s student-led if it needs to be. It’s not like it’s scripted, I can always pull a rabbit out of my hat if I need to. So, a student has a goal that’s following two-or-three step directions. But then one day the student might show up without his cochlear implant. So I give him an activity like that, but I sign it, we do it that way. Or we can still focus on vocabulary, but not through auditory and speech production so much, using the vocabulary – maybe one of his goals is syntactically correct short simple sentences, so we might plug the vocabulary into short, simple sentences. Meeting a different goal. So you have to always be cognizant of their different goals and have materials to plug into those goals. And if they come in and the cochlear implant is “on,” you do the auditory. Like, I had a girl who, for two weeks she was “down,” [her CI wasn’t working.] She came in today, she’s “up.” OK, plug in that auditory goal, you know? You always have to go with...be prepared.

Neither BOCES not LSD therapists addressed the same necessity to spontaneously modify activities, possibly because they had more homogenous caseloads or predictable therapy sessions than did the 4201 therapists.

Another 4201 therapist, also with thirty-three years of experience with deaf children, reported on her use of her extensive knowledge in her daily therapy responsibilities:

I think a “bag of tricks” is knowing what are typically difficulties for the children. So I have tons of pictures, I have photo libraries all over the place with pictures of common objects, with verbs, with home items, school items, so I can always grab a picture... Yesterday I had a child come in, I had a whole auditory lesson planned, and she had left her implant at home. So immediately, I was like “we’re not gonna work on speech and we’re not gonna work on audition. We’ll work on speechreading.” So whatever I was
planning on doing with auditory training – I was gonna work on auditory memory – I just switched that to speechreading. So I think knowing that you can have a bag of tricks but change it quickly if you have to.

Parent counseling and education was another job responsibility mentioned by the therapists. A therapist in a BOCES program spoke of the large amount of parent counseling and education she does:

We had a new student come in this year. He comes in, the reason he’s here with us is because the father said “You guys are the hearing specialists.” But we’re slowly telling him, “no, it’s more than just hearing issues.” So we have to meet with them and we do – every two or three months, we are on the phone, saying “Look, he’s doing this, he’s doing this and this, which he wasn’t doing when he came in.” But then they want to know, “Well where is he compared with the other kids in kindergarten?” And we have to say “He’s not up to that level.” He doesn’t even sit. It’s hard for him to look. Pointing out to them the comorbidities, those other disabilities, it’s hard.

A therapist at a 4201 school spoke of the counseling she performs with parents regarding their expectations for the success of a child receiving a cochlear implant:

…the children are implanted and [the parents] come and they’re like “Make my child speak.” Then at that point, we kind of tell them in the nicest way possible, we’re not saying it’s not gonna happen, but that it’s not a quick fix and it requires a lot of work, a lot of training in the school environment and at home. So, first I think is trying to get [the children] to wear the device, if that’s the issues, trying to develop strategies or motivation for the kid and working with the parents in educating them of how important it is – they need to be wearing the device all the time.

A therapist in a local school district who works with a child with bilateral cochlear implants reported on her experience counseling her student’s parents:

The mom called me after [her child’s CSE meeting] and she said “Gee, I’m still not sure, I don’t know if I’m sending him to [this school district] or if I’m keeping him in a private school”...And I explained that the school district would have to agree to pay and chances were they were not going to do that. But then she came here and we really hand-held a lot and had meetings with
the principal, talked to mom and dad extensively and now they are over the moon, they are so pleased with the whole school district.

When describing their jobs, most therapists discussed feeling frustrated with a number of aspects of their jobs. Many discussed feeling frustrated by poor parental compliance, including parents who do not support English language acquisition in the home, parents who do not enforce their child wearing their listening technology at home, and parents having unrealistic expectations for their children’s success. Therapists in the “4201 schools” also spoke of feeling frustrated with slow student progress.

A therapist in a 4201 school shared this about a parent of a child on her caseload:

You have a student who you think could be an auditory-oral child, but yet you realize just from working with him in a short period of time, you realize they’re not learning through auditory means. I had, more specifically, a little girl who came up from the parent infant program, and they were pushing her and pushing her, and I’m like “I got her.” And I sat here five days a week across from her, she was absent a lot, she wasn’t getting a lot of support at home, I think her mother was taking the CI and putting it in a drawer when she got home, even though it was explained to her time and time again, I think it was a Spanish speaking home, so that was a real challenge, that this child is a visual learner and she needs ASL.

A therapist in a large, urban local school district shared this about her students’ parents:

It’s hard. The ones that are super-involved, they want your help. And then there are other ones who just want nothing to do with you. You know, what they do is right and you just have to go with it.

It should be noted that this frustration could have more to do with the student population coming from an impoverished background than with their
hearing status. This school’s self-contained class for the deaf serves students from some of the poorest neighborhoods in its city.

A therapist in a BOCES program spoke of what she perceived to be unrealistic expectations held by some of her parents:

Some parents nowadays want strictly auditory verbal, I understand, but if a student is having a lot of trouble processing what’s being said, is that the best route? So the challenge is finding the best avenues for these students, having the support from the educational environment and having the support from the parents.

Another therapist at a 4201 school shared this about her students’ parents:

They don’t get a lot of [communication] at home. Other parents are sitting down with their children reading; here the parents aren’t doing that with their kids, so when I sit down and work hard with them, that’s what they need. That’s what they all need.

A therapist at a 4201 school spoke of some of her students’ families as having unrealistic expectations of how a cochlear implant could benefit their child:

[The parents] usually don’t come to us for counseling, which I wish we could be more involved in...but we get the part when [the children] are implanted and [the parents] come to us and they’re like "Make my child speak."...It’s not a quick fix and it requires a lot of work, a lot of training in the school environment and at home. We find a lot of parents of implanted kids don’t even make them wear the implant at home.

A 4201 therapist discussed her frustrations with low student achievement:

I sometimes find it very frustrating. Because children who are hearing impaired or profoundly deaf miss out on so much. We have them come in, a lot of them have very low literacy levels, their reading levels are usually, let’s say they’re ten years old and they’re really at a first or second grade reading level. That’s a frustration for me.

Analysis of the types of frustrations therapists reported revealed a relationship between these frustrations and the types of populations represented in their programs. Therapists in all participant groups reported a great deal of
misinformation among parents, poor communication between parents and children at home, and a lack of support at home for speech and language goals, with 4201 therapist reporting the most frustrations and the therapist in a suburban school district the least. This could be due to the differences in demographics between the suburban and urban communities, especially considering the characteristics of the 4201 students described in Chapter I of this manuscript (including students from impoverished backgrounds, immigrant families and families that don't speak English fluently.) The low reading levels, unrealistic parental expectations and poor follow-through at home that contribute to the frustrations therapists have seems to be more a function of socio-economic issues combined with deafness than of deafness itself. Alas, the only therapist who did not describe frustrations related to the above-mentioned factors worked in an affluent suburban district. She described her student’s parents in the following way:

He has a phenomenal family...he has an amazing family who are such incredible advocates for him.

This therapist continued on to discuss the support she has received from her district:

My student was having some difficulty when he was localizing the sounds, so we ordered a Dynamic (a pass-around microphone coupled with a multi-talker FM system), which was fine – we just had to have a special review, the school district approved it, no issue...the district as a whole is really supportive, they are a really good district in terms of supporting any of the needs of the children.

Perhaps the most obvious difference between the 4201 professionals and their BOCES and local school district counterparts is that while 4201 therapists work exclusively with children with hearing loss, therapists in BOCES programs and
local school districts serve students with a wide range of disabilities. Both BOCES therapists discussed that they work with populations of students other than those with hearing loss. As one therapist in a BOCES program noted:

No one is strictly working with the hearing impaired population because it’s dwindling down, pretty much.

A therapist in a local school district echoed this:

[Prior to this current student] I had never worked with a profoundly deaf child, but also in our school district we don’t have that many, so I would say that in thirty-five years, we’ve had maybe five profoundly deaf students.

The large exposure to a diverse population of deaf children that 4201 therapists have likely enabled them to gain the deep experience needed to target not only higher-level communication skills, such as auditory and speech development, but also the lower-level functional communication skills needed by many deaf students who primarily use visual communication. Therefore, it can be said that therapists whose entire caseloads consist of deaf children inherently have different job descriptions than those whose work with deaf children is intermittent.

**Category 3: characteristics of students and their families.** All therapists in “4201 schools” also talked about the variability in their caseload, which reportedly consists of children who use a variety of communication modes, children whose home languages are not English, children who recently immigrated, and children who have a range of auditory, speech and language skills. This theme was also present in the interviews with therapists in one large urban school district and a BOCES program with a self-contained class. It was not present in interviews with therapists in the other two school districts (both of which generally accommodate
only children who use listening and spoken language) and the other BOCES program, possibly because of the paucity of deaf students with which they worked.

The following quote from a 4201 therapist epitomizes this finding:

I’ve learned that we have just about every student you can think of on the communication spectrum here. We have students that are Deaf – Deaf Deaf – don’t use any auditory, you know “Capital D Deaf.” They don’t use any auditory access to language, they are strictly visual. And then we have functionally deaf students on the other end that are totally hearing, but for whatever reason they can’t speak or they’re not getting the same access to language as a normal hearing person. And then we have everything in between. We have students that sign exact English, students that speak other languages and are learning sign maybe as their second or third language, we have students that use devices, so we have just about every communication issue out there.

Another 4201 therapist in a different school shared the following:

We have one child who the parents do not want spoken English, it’s a very “ASL/Deaf” family, and he does not wear any amplification. With him, it’s speechreading, voice for alerting. Then we’ve got kids who, parents tell me straight up front “We want to mainstream our child.” We have some parents who want CIs, some parents who don’t... [The children] are so varied. I’ve had so many autistic kids lately who are deaf. There’s just such variability within the population.

Another common theme among 4201 therapists was the increasing prevalence of additional disabilities among their deaf students, as expressed in the following quote:

Coming out of graduate school, I thought it would be a lot more clean cut, but everything is so different. It’s so diverse, every kid has very different needs and levels, so it makes it really challenging. We have kids on the [autism] spectrum, we have kids who haven't been diagnosed with anything in particular but we know something else is going on, a lot of kids that seem in the spectrum but aren't necessarily diagnosed. Some syndromes, we have kids with more medical issues, kids in the preschool that have cerebral palsy or physical feeding issues, feeding tubes and walkers.
In describing the characteristics of her students, the therapist from a large urban school district who worked with a self-contained class of deaf students revealed that they share many of these features with students in the “4201 schools”:

A few of them have syndromes...and then some of them are just from another country who came here and are learning sign language and English. So they have a lot of needs...Some of them have emotional needs, so I guess they would be double-classified as “emotionally disturbed.” Some of them are really far below grade level, like reading level at kindergarten or first grade. And some of them just couldn’t handle being with kids in the mainstream.

The BOCES therapist described her students in a similar way:

One student is pretty much Deaf/ASL, the others hard of hearing, others also hearing impaired with some other problems...One student has two implants, can hear speech beautifully and can repeat back, but doesn’t always understand. In the elementary school, I would say seven out of the eight students have additional problems. In the middle and high school, not as many.

The descriptions above all came from therapists who work with students who are educated at least to some extent in a self-contained, non-mainstreamed environment, which by definition indicates that these are students who do not have the academic and communication skills necessary to succeed in a regular education classroom. Therefore, it makes sense that they present with similar characteristics, specifically those that would make it difficult for them to be educated in the mainstream.

Category 4: sense of self as a professional, including background, training, strengths, weaknesses and perceived skill set. All participants drew upon experiences in their undergraduate and graduate training, clinical experiences, and populations with which they had previously worked when discussing how they had become prepared to work with severely to profoundly deaf students. Several
felt that prior clinical placements with children with hearing loss, a depth of experience with deafness and a long-term interest in serving this population had helped prepare them to provide high-quality services to these children.

The following quote is from a 4201 therapist who expressed a life-long interest in working with deaf children:

I just couldn’t get enough of deaf children, so when I found out there was an opening here with the three-to-five year olds at the school for the deaf, I knew I had to make the move. I love it, I have the training from college, I have the training before college, I started off signing Signed Exact English, but then I moved toward ASL. I’m also fluent in Cued Speech.

Another 4201 therapist discussed her preparation through her graduate program:

I went to a program that specialized with working with deaf and hard of hearing kids…I interned at the NYU Cochlear Implant Center, that was one of my graduate placements, also Rochester School for the Deaf, and National Technical Institute for the Deaf. It was a regular speech program but you have additional coursework, with a focus toward working with this population. There were specific courses, we had one that was called Developmental Issues in Deaf learning, one called Assessment and Intervention, we did ASL, we learned Cued Speech, a lot of our placements were focused on that population.

Several 4201 therapists spoke of their direct experience with deaf children throughout their careers as supporting their learning and strengthening their abilities to work with this population.

I just feel that I’ve had so much experience. I can even tell you when I’m giving a test what items [the students are] gonna miss. “Mermaid” is “FISH-WOMAN. “Footprints” are “FEET.” You just see patterns year after year and you’re very aware of what you’re looking for.

A therapist in a 4201 school shared the following:

I just learn so many things from them, about language and the way they perceive the world, which is completely different when they grow up in a limited language environment, I guess, because most of them don’t have sign language at home, and the way they perceive the world like I’ll do an activity
with them, and they’ll give me some off-the-wall answer, and I don’t understand how they got that answer. And I’ll say “Why are you saying that?” And they tell me their perspective and I suddenly realize “That’s why you’re saying that? Holy Cow!” And then I can explain “that’s not the answer because....” And then I’m learning from them so I can teach them. And everything you learned in school didn’t really matter, because you’re learning from the kids.

Several therapists spoke of their ongoing work with assistive listening devices, and the learning curve with those devices. A therapist in a local school district who had previously had limited experience with assistive listening devices spoke about her learning process.

Well, those first few months, I was mainly just working with him on the FM unit, and my notes, when the consultant came, I would draw little pictures as she was talking me through it, because I was like “What’s i-connect? What’s the FM unit?” You know, these were all new, MAPping was new to me. Now I speak to the audiologist when he goes in for his MAPping, I do a lot of work with minimal pairs and I can tell her “I don’t think he’s working on this nicely,” so knowing where the switches were, and the first two months I was thinking “Oh my goodness, I knew this would be a challenge but maybe I bit off more than I could chew. But now I feel a bit more comfortable with it...

Several 4201 therapists and one local school district therapist who work with students who sign spoke of the additional and unintended responsibility of serving as a support system and counselor for their students. These therapists discussed how their students’ limited abilities to communicate through spoken language impacted their relationships with their families and limited their support network to those individuals they see in school. The quote below is from a therapist in a local school district who works with deaf children in a self-contained, total communication classroom:

They’re completely different than any other population that you work with. They have a different sense of humor, and they will try to drive you crazy but they’re the sweetest kids that I’ve ever worked with, and they just want someone to talk with. And they don’t teach you that in graduate school – that
you have to be a counselor, too, with a lot of these kids. Sometimes that’s all they really want, is someone to just tell their problems to because they don’t have anybody else to talk to.

A therapist in a 4201 school also spoke of her students’ emotional needs:

When we were kids, we couldn't wait for Christmas vacation. Here, when it’s approaching a vacation, that’s when you see a lot of them acting out. I work with many of the older children and they’ll come in and cry, because they don’t want vacation. They hate vacation. They’re bored, they have no one to play with. Their parents don’t really communicate with the other parents, they don’t make play dates. So the children can basically spend ten days at home not communicating with anyone. The children, through the years, have told me that at home, they just take their dinner into the bedroom and eat because everyone is chatting around the dinner table and they have no idea what’s going on anyway. So I think I’ve seen a lot of sadness and change in emotion as the children reach a certain age.

Again, this theme seemed to reflect the population of students with which these therapists worked. Students whose communication skills were limited to sign language may depend on their signing teachers and therapists to discuss personal matters and seek counseling. Therefore, this theme was not present in interviews with therapists who work with children who have strong listening and spoken language skills.

One of the main research questions of this study was to elucidate the skill set that speech pathologists who work with deaf children report having. The researcher will outline these skills below. The reader should note that in conducting this study, the researcher recruited therapists working with deaf children working in educational agencies along a continuum of possible educational placements ranging from full inclusion to BOCES to “4201 schools”. The majority of therapists who participated in this study have had some experience with deaf children who use sign language, who have additional disabilities, who emigrated from other countries,
or who have various other factors that impacted their ability to function well in an auditory environment. The exception was a therapist from a suburban school district, who reported on the clinical skills she has developed to work with a deaf child with bilateral cochlear implants who uses only spoken language to communicate. It can be assumed that, had this study been conducted with therapists at auditory-oral preschools or auditory-verbal therapists at cochlear implant centers, the skill set would be different or more narrowly defined. It must be emphasized that the skills listed below are those deemed necessary by therapists working with children typical of the “4201 schools”. Following the list of skills, the researcher will present quotations from therapists that support these findings. The skill set reported by speech-language pathologists working with severely-to-profoundly deaf children included:

- The ability to adapt or modify methods depending on an individual child, school philosophy, parent preferences or type and status of a child’s amplification (whether or not a child’s listening device is functioning on a given day)
- Knowledge of therapy materials and how to modify them for children with hearing loss
- Knowledge of auditory and speech hierarchies
- The ability to educate parents about how to work on speech and language at home
- Ability to educate other staff and faculty in the school in methods to help stimulate speech, language and listening development
• Ability to scaffold therapy activities appropriately (moving back and forth seamlessly from auditory presentation of material to speech reading, to sign language, to gesture)

• The ability to use sign language

• Ability to use other forms of visual communication, including Cued Speech and communication boards

• Flexibility, meaning the ability to modify therapy activities due to unexpected factors

• The ability to understand and interpret audiological information

• The ability to troubleshoot listening devices, such as hearing aids, cochlear implants and FM systems

• The ability to recognize the presence of additional disabilities secondary to deafness, and to perform differential diagnosis

• Ability to counsel parents and to incorporate a family’s culture into therapy planning.

There was a great deal of homogeneity among the responses from 4201 therapists. All 4201 school therapists listed sign language as an important skill to have when working with their students. The following quote gives a rationale for therapists needing strong sign language skills to work with this population:

Although it seems counter-intuitive, I think [therapists] need to be skilled at sign language. I really do, because many of our children are manual, or manual by choice. So to have a child come in, ok they’ll vocalize for the thirty or forty minutes [of the session], but if you can add some sign and explain what you want them to do and express the purpose, and then have them try to listen or they have to try to articulate or speech-read, at least now they understand. They can’t understand what’s expected of them always as you’re
explaining it just orally.

This was echoed in the following quotation, which lists a broad spectrum of skills needed to work with students in “4201 schools”:

[A therapist would need to know] sign language. An ASL student who communicates through sign language – to work effectively with that kid you really need to speak the same language. So yeah, sign language skills. Auditory-verbal skills for the auditory verbal preschool kids and the cochlear implant kids – you have to know how to work with those kinds of kids. Autism – you have to have some behavioral skills so that you know how to work with these kids and get them to attend and focus and learn...And [skills for working with] physically challenged kids.

4201 therapists also spoke of the importance in knowing about listening technology and troubleshooting techniques.

It’s very important to know the students’ equipment, to know how to change a battery and to do a listening check – to use the Ling six sounds...I want to make sure that when the child comes into my room, that he is answering questions the right way, or does something seem off? Maybe he’s sick, maybe he’s congested. Are the batteries not working? Basic, everyday things that we have to do.

While this therapist described checking and troubleshooting listening technology as a “basic” and “everyday” responsibility, the researcher knows from personal experience that this kind of work is not typical for speech-language pathologists who do not work with children with hearing loss. It is an acquired skill that is typically not taught in graduate training programs, and it is a skill that can easily be lost without regular practice. In addition, those working regularly with these devices are aware that the technology they utilize is constantly changing and improving; therefore, it is critical that therapists stay informed and up-to-date on the newest types of listening devices available. One 4201 therapist who had attended a specialized graduate program for working with children with hearing
loss, shared the preparation in the area of listening technology that she had received in this unique program, as well as other skills she brings to her clinical practice:

I think I have a good background in amplification devices, so I have the knowledge to do basic troubleshooting and what to look for, and the speech therapists in the preschool – we do daily listening checks and we can figure out what to do if the device isn’t working. At [graduate school] we had a whole course on cochlear implants so I know about all the parts, how to take it apart, how to troubleshoot. I know about aural rehabilitation, knowledge of the auditory hierarchy, how to do the listening hierarchy, all of the tools and programs out there – the SPICE (Speech Perception Instruction Curriculum and Evaluation), CASSLS (Cottage Acquisition Scales for Listening, Language and Speech).

4201 therapists also felt they were equipped with a variety of tools that specifically addressed the needs of their deaf children, and that they had developed this toolkit through years of experience with the population. One therapist describes her skill set related to deaf students below.

I think that a strong background in pragmatics [is important], and a background in deaf language and ASL because a lot of the kids [use] ASL…a strong ability in articulation production skills, placement skills, knowing how to do a lot of tactile kinesthetic placement work with kids because they’re not getting it [through the auditory channel. I went to a meeting because I belong to a local speech and hearing association, and someone was saying “you know, I can’t get a /k/ [phoneme] out of my deaf student.” She said “I’m trying this...” and I said “Stop right there, you’re gonna get a glottal. Move it front to back, use a tongue depressor.” And then I saw her at the mall or something and she said “I got the /k/!” So it’s these specific techniques that work for kids who don’t have auditory access.

The skill of “ability to modify” was prevalent across all three groups, as therapists frequently spoke of their ability to modify their assessment tools, their therapy materials, and even their methods of communicating with their students as being a part of their skill set. One 4201 therapist described her need to modify her
language when communicating with a child who uses both sign language and English to communicate:

When you approach a deaf [child], you think you can just have a conversation because they’re looking at you signing, and sometimes they don’t understand what you’re signing because you have to bring it to their level. You’re forever adjusting how you speak. You start off using very simple sign, waiting to see how they engage you, what they can understand. You have to sometimes use different words, and plug in different words for the target...you’re adding adjectives and you’re changing it around, and you have to think that in your own mind before you put it out there.

Responses from LSD and BOCES therapists were more diverse, with one BOCES therapist and one LSD therapist describing their skill sets similarly to those at the “4201 schools”. These two programs involve self-contained total communication classes of students, which may be a reason for the similarity in their skill sets. The following quote is from a therapist who worked with deaf students in a self-contained total communication classroom in a large urban district. She describes the new skills she had to acquire in her transition from working in early intervention with typically hearing children to working with middle school-age deaf students:

I had to learn how to sign, how to use an FM system, the differences between one cochlear implant and another, if they were MAPped correctly, if the students were receiving any input from their hearing aids, how to tell if their [devices] weren’t working...To feel really comfortable [with these new skills] where I wasn’t really nervous about it probably [took] a year. You know, to feel like I could just come in and I just knew what I was doing.

A speech pathologist from another urban school district that does not have self-contained classes for the deaf reported these skills he feels are necessary to work with this population, as well as his frustrations with the perceived ill-preparedness of most therapists to work with deaf children:
Most speech [pathologists] can’t read an audiogram. I start with that...Speech pathologists don’t understand the audiogram, and the ramifications of it. If you don’t have that basis to say “What do they hear?” then what are you doing? The skill set...um, patience [is needed]. And I’m not saying that most SLPs aren’t [patient], but you can see progress – a faster rate of progress – with a [typically hearing] traditional articulation kind of case. The fact that you might have to repeat a vocabulary word fifty times to a deaf kid compared to a hearing child with whom you’re just working on language. There aren’t a lot of places that really train [therapists for this kind of work.]

It should be noted that this therapist is a certified and licensed audiologist.

Therefore his focus on the importance of the audiogram may not only be due to its relevance to this population, but may also be a function of his background and training, as mentioned in a previous section of this chapter. In addition, while this therapist works at several schools in his district, he is the therapist with primary responsibility for the deaf and hard of hearing students within the district.

Therefore, for reasons mentioned above regarding the 4201 therapists, he may have additional expertise due to the depth of experience he has had with this population.

The two remaining therapists, one from a suburban school district and one from a BOCES program that does not offer self-contained classes, listed somewhat different skill sets that they felt they needed to work with deaf children. The therapist from the suburban district who works with one child with bilateral cochlear implants describes this child’s speech and language skills as follows:

His articulation is really good, his voice quality is excellent...he’s done so wonderful with his articulation that this year I reduced [his frequency of speech services] to two times a week.
Likely due to this child’s high level of functioning, this therapist, who had never worked with a deaf child prior to him, described her skills in the following way:

I need to know how to fix his FM. I test it every morning. I change his batteries if there are any issues. And I think a big part of it is just talking and helping the other professionals and staff in the building, explaining how to adjust issues [related to the FM] and how to handle them.

It is possible that because this student’s speech and language skills are so strong, his speech therapist’s main roles relate to his listening technology and to mediating between the child and other faculty members of the school. This therapist is interesting because, for many reasons, she could be described as the single outlier in this study. While she has over thirty years of experience and extensive clinical skills for working with children who are typically hearing or with mild-to-moderate hearing loss, she was the only therapist involved in this study who had never worked with a profoundly deaf child prior to the student with whom she currently works. While clearly highly qualified for her position and well credentialed, she was the only therapist interviewed who did not have basic sign language skills. She reported having the necessary clinical skills to work on listening, articulation and spoken language, but the same could be said for most certified and licensed speech-language pathologists. Missing from her self-described skill set were several skills emphasized by 4201 therapists and one BOCES therapist, including: ability to adapt or modify methods depending on an individual child, school philosophy, parent preferences or type and status of a child’s amplification; ability to scaffold therapy activities through several modes of communication (listening, speech reading, sign language, and gesture); ability to use
other forms of communication, including sign language; and prior to working with her current deaf student, she did not know troubleshooting techniques for assistive listening devices. Below, she describes her learning process during her first year working with this student:

I think as far as his academics, speech and language, auditory training, I think that from the beginning it was definitely a learning curve but I think I came in well-armed with what I needed to start out with. And then the more courses [in aural rehabilitation] I took, the more adept I got at it. And the equipment took me, not until the end of that first year that I could say I didn’t have nightmares about it.

While this therapist is the outlier in this study, the reality for deaf students throughout New York State is that therapists like her – well credentialed, experienced, creative and tenacious, but lacking in experience with deaf children – are the norm. These are the therapists who would suddenly find profoundly deaf children – many of whom sign and most of whom use assistive technology – on their caseloads if the “4201 schools” were to close. The implications of this will be discussed in Chapter V.

**Category 5: changes related to the field of hearing loss.** Ten of the therapists interviewed spoke of at least one dimension of change that had occurred in the field of deafness that impacted their work. These changes related to the following phenomena in the fields of listening technology, legislation, deaf education, and speech language pathology: (a) technological advances, including the development of cochlear implants; (b) evolution of school communication philosophies; (c) changes in the abilities and skills with which deaf students present and resulting modifications in therapy goals and outcomes; (d) legislative
developments that increased access to the mainstream for deaf students; and (e) changes in the types of educational placements available for deaf students within their schools.

Predictably, the therapists who mentioned experiencing the most amount of change were those with the most years of experience. The following quote from a 4201 therapist with over thirty years of experience at her school demonstrates the vast array of changes she has witnessed during her career.

I started here back in 1978, we had a larger population then and we had more “normal deaf” kids. We were just at the tail end of the rubella epidemic and since then I’ve seen again our population has decreased and we’ve gotten a much more diverse population...and we have a lot more kids with implants at all cognitive levels.

This therapist’s quote introduces the reader to the change in her school’s population, which over time has diminished but also become more concentrated with students who are recent immigrants or who have additional intellectual, behavioral and physical disabilities. Below, she describes this evolving student body.

We’ve got a lot more kids from out of country that are coming in and maybe had no programming at all until maybe kindergarten and they’re coming in with nothing. I might have a girl that’s ten years old, but she’s only had [speech and language] programming for five years.

The theme of an increasing population of students with additional disabilities was present in about half of the interviews, and was not unique to any one group of professionals. Therapists in both BOCES programs, one local school district, and several 4201 programs addressed this phenomenon, which mirrors what is happening in schools across the country as children from around the world move to the United States and begin attending school here. While schools around our
country grapple with how to best teach these children, programs for the deaf and hard of hearing perhaps struggle even more, because many of these children come to the United States having never had access to listening technology, sign language, or even schooling. The researcher has personal experience with this from her time working at a 4201 school. In any given year, at least half of her caseload consisted of students who had emigrated from countries in South America, Africa, and the Middle East. Most of these children had never used sign language and had no spoken language. Several, even some teenagers, had never been to school. This is a critical issue that programs for the deaf, especially in geographic areas with a large immigrant population, deal with on a daily basis.

Another theme present in this category was that of the evolution of technology, and how schools and programs have adapted to these developments. The same therapist quoted above went on to explain how technological advances have altered her clinical practice.

There’s a lot more listening [work] now, and conversely more speech production goals, because if they are getting more auditory access then that’s reflected in their speech patterns.

She continued on to describe the changes her school has made in order to accommodate the increasing number of students with cochlear implants.

They put up a Cochlear implants program within the program in the lower school, because that was where the kids were who were being implanted. And then we had more and more kids being implanted, so [the school administration] invested in the training for the rest of the speech therapists.

This therapist’s school was not the only one to modify its program in order to accommodate children with cochlear implants. Several 4201 therapists spoke of
their school’s decision to implement auditory-oral preschool classes or a spectrum of classes offering varying degrees of spoken language instruction to meet the needs of students with increased auditory access.

Another area in which a great deal of change has taken place is the technology deaf children use and the increase in speech and language skills that result from having greater access to sound. An SLP in a 4201 school shared how digital hearing aids and cochlear implants have give her children access to spoken language that previously had not been possible for most of her students:

I think [deaf children] is probably one of the populations that has changed the most, in philosophical issues and methodologies because of technology. When I first started twenty-five years ago, I was working with profoundly deaf children who needed ASL and that was it. Now I’ve got profoundly deaf children who hear better than I do.

This therapist went on to draw the connection between technological developments and changes she’s been able to make to her clinical practice to conduct improved differential diagnosis and target auditory learning.

...I can use tests like the CELF (Clinical Evaluation of Language Fundamentals) or other tests that will pinpoint language issues or language disorders. We’ve never been able to do that before because we’ve never had a group of deaf students who fit that criteria. They’ve always had, even with hearing aids, they never quite came up into the speech frequencies, so you can’t separate a hearing loss from a language disorder. But now you can. And now we’re looking at a group of kids that we have in the school that we can safely diagnose as “language disordered.” And now we’re working through the academics and the literacy and phonemic awareness with them, which we’ve never done before.

Another 4201 therapist with over thirty years of experience in her school discussed technological changes as well.

Children did have hearing aids, they were usually box hearing aids with the long chords...over time, the hearing aids in the classrooms changed. Teachers began to use FM units and microphones. So everyone was really
concerned about making sure the children could get a lot of auditory stimulation, a lot of speech stimulation...Over time, now, of course technology has changed. We have many, many children who have cochlear implants, thus giving us a whole different perspective on how to work with these children auditorily.

Finally, two BOCES therapists and one local school district therapist commented on changes they've witnessed related to legislative achievements for children with disabilities. It is likely that while 4201 therapists never mentioned legislative developments, the BOCES and LSD therapists did so because prior to the creation of special education legislation, children with profound hearing loss did not attend schools in their home districts. Therefore, the therapists who have noticed the impact of these changes are those who work in districts that prior to the Individuals with Disabilities Education Act (IDEA) were closed-off to children with disabilities. Likewise, while no 4201 therapists mentioned IDEA, increased access to the mainstream for deaf children could be one reason that many of the schools for the deaf are seeing reduced enrollment, or fewer students who do not have disabilities in addition to deafness. As a result of IDEA, profoundly deaf children now have the option to attend school in their home district, and technological advances in hearing aids and cochlear implants make attending a local school even more feasible for children with hearing loss. The following quote is from a BOCES therapist with over thirty years of experience.

When I first started teaching it was when the original IDEA had come in, where special education in schools was now a viable concept, because it wasn't prior to that. You only had [schools for the deaf] and specialized programs. If you had any type of hearing impairment that was severe, you'd never see a public school at that point.
A therapist in a local school district also discussed these legislative developments and how they had manifested themselves in his district.

There used to be some self-contained programs [in this district] for deaf students. Those are now all gone due to mainstreaming or inclusion [as a result of IDEA]. The teacher of the deaf became a support person instead of a classroom manager.

*Category 6: references to outside entities.* Nine therapists, across all three groups, referenced entities outside of their school or program in interviews. These included references to: local school districts, schools for the deaf, BOCES programs, District Committees on (Preschool) Special Education (CSE/CPSE), Transitional opportunities for students, alternative placements available, and classrooms or homerooms (the general education environment.)

Some of the 4201 therapists actually discussed frustrations and concerns that related to their students’ home school districts. For example, several shared an ever-present fear that local districts would “pull” students back to attend local schools rather than paying for them to attend schools for the deaf. As mentioned in Chapter I, the cost of sending a child to a school for the deaf is high for school districts, and many may feel it is more economically efficient, at least in the short-term, to draw these students back to their local schools. Below is a quote from a therapist in a 4201 school that provides an auditory-oral preschool, the goal of which is to eventually send all of its students to regular education kindergartens in their home districts:

This one little girl, she’s only three, but we’re gonna have a tough time at her CPSE meeting because she tested so high for speech and language...she’s turning four, and her mother is hoping she’ll be [here] for one more year before she goes to kindergarten but the school district will see how well she’s
doing and they’ll be on the fence, so we have to make a case for her, and sometimes when the scores are so high, you can't make a case for them.

Another therapist in a 4201 school expressed frustration that local school districts don’t often recognize the challenges that she and her colleagues face:

I might have a girl that’s ten years old, but she’s only [had auditory access] for five years, and the district’s like “Why isn't she functioning more like a ten year old than like a pre-schooler?” And I’m like “well, guess what – you know, her language age is maybe four or five based on the amount of exposure she has had for five years.” So there’s always the [sense] that people (in the district) don’t really understand the language age piece and the chronological age differentiation.

Other therapists expressed genuine concern over the local school district’s ability to provide high-quality services to these students. One therapist was concerned that, should her students be brought back to their districts, they wouldn’t have teachers who could communicate with them:

If they were in a public school, the teacher may not know sign. So they'd really just be alone, unable to communicate because they cannot hear.

Some spoke of past experiences they've had with the local districts that led them to believe the districts are ill-equipped for the needs of deaf children:

I’ve read a lot of reports coming in (from evaluators in the local district) and it’s really unclear how the child actually performed. They’re not really giving detailed information, or they might just give a test in spoken English when the kid is a signer, and it shows you that they can’t learn that way (through spoken English) necessarily, but it doesn’t really show you their language skills either. I think that’s been challenging, setting appropriate goals for the kids coming in from other settings, [the evaluators] are writing goals that aren’t appropriate.

A therapist from a 4201 school that serves children in rural areas discussed the paucity of alternative placements for profoundly deaf children in her area:
I know a lot of kids might go through Early Intervention, home-based services and things. There might be some schools in the community where teachers of the deaf can go in. There really isn’t [an alternative to the school for the deaf] structured in the community, there’s no auditory-oral program or anything like that out here.

One therapist in a large, urban school district discussed that historically, his district had provided self-contained classes for profoundly deaf students. He noted that legislative and technological advances had led to the deterioration of this system, since deaf students in his district are now successfully fully mainstreamed. For those students in his district who cannot function in a mainstream setting, he added “we still have the school for the deaf.” The inclusion of this sentence indicates that he feels that the local school for the deaf meets a need among deaf students that the local school district cannot. This sentiment was echoed in a statement by a therapist in a BOCES program that exists in a geographic area that has two schools for the deaf:

Rarely in this type of setting would you have a class for the deaf because there usually isn’t the critical mass to have it here. That’s one of the reasons we have the schools around here that we have – we’ve got [the schools for the deaf], we’ve got a number of other center-based programs, so they have always tended to be the home-base for the severely [hearing] impaired students, no matter what their cognitive levels have been...

This therapist went on to describe his perception of what an academic situation for profoundly deaf students would be should the area’s schools for the deaf close:

The BOCES program probably would be able to handle taking all those students in, they would be setting themselves up as more of a hearing-impaired center. If the need is there by the districts, BOCES will always work to provide the services for it. But [working with deaf students] tends to be very individualized and a district may only have one student in their entire district that may go to the [school for the deaf] so if it closed, all of the
support services they would have to bring in would be something that usually [the districts] don’t even have the resources to do.

These concerns by therapists experienced with deaf children should not be ignored. They are familiar with the needs of this student population and are skeptical of the capacity of local districts to meet these needs in a manner that is consistent with their ethical and legal obligations. The implications of these concerns will be discussed in Chapter V.

**Emergent themes: case studies.** Analysis of case study responses from therapists revealed the following themes: (a) therapist’s thoughts on the appropriateness of their program for this child, (b) therapist’s perceptions on their own preparedness to work with this child, (c) references to alternative programs to which this child could be referred. In general, case study responses provided further support for the findings from interviews.

Therapists’ perceptions of their ability to provide services to this hypothetical child and his potential to succeed in their particular placement were consistent with what they had reported during interviews as their program’s accessibility to students like this child, as well as their own skill set as it relates to serving this population.

**Category 1: appropriateness of therapists’ particular program for the child.** 4201 therapists overwhelmingly agreed that their schools, with their emphasis on visual communication, ability to provide individualized speech therapy, and faculty of therapists who have experience with deafness and aural rehabilitation, would be appropriate placements for the child represented in the case study. The following quotation from a 4201 therapist describes the range of
options that are available at her school to accommodate the array of needs and abilities of the school’s students:

> We set up our program in this way, where.. like one class I have is dual language (English and sign language) but I would say 90% of the time it’s auditory oral, they can really get information and learn that way, but at the same time some of the kids need that sign to help them develop concepts or learn certain things. The classrooms downstairs are like 50%/50% where there is more signing and their auditory skills are less so they really need to back up and work on them but at that level. And then you have 100% auditory classes, so you really have that spectrum so that depending on what it is determined this child needs, there is a placement for him at this school.

Another therapist in a 4201 school envisioned this child’s placement in her school:

> This looks familiar, we have a couple of kids like this. At this school, he would probably be in [teacher’s name] classroom – sign supported. It’s kind of a mixed bag classroom. They’re four, five and six years old, they use sign and speech, but the sign support is there.

One therapist in a suburban local school district said the following about this child’s potential placement in her school:

> He would never be in this school...He wouldn’t not be in our school district not because he has a CI or anything like that, but because he wouldn’t pass our kindergarten screening. Any student in our school, if they have a learning disability, or any kind of academic disability and they’re classified, they can get resource room. But that’s forty minutes a day. So given all the options of most restrictive to least restrictive environment, there would be no place for this child in my school district. We would be sending a referral out [for him].

A therapist in a large, urban school district discussed his district’s ability to absorb this child. He discusses the modifications that would need to take place in his district, which, due to funding problems, he feels would have difficulty setting up the type of program that a child like this would need:

> Could we create self-contained classes again? Yes, we could. Would it take time to do that? Could we hire those teachers? We don’t have the ability to do that in this district. And neither does BOCES. If the state were to close the
schools for the deaf...would we create a similar program in the school district? We could, and my supervisor is gonna say “Absolutely.” But he was one of the primary people to eliminate the self-contained classes here. Our teachers of the deaf are now support staff to general education teachers.

One therapist who works in a large, urban school district with numerous placement options for deaf students, reported the following:

_He would fit in the total communication classroom we have in [this district.] He seems like the kind of kid we have in those classes._

However, this same therapist shared the following about the students who are typical of total communication classrooms in her district:

_I think we’re kind of like the last resort, where they have behavior issues and whatever and they come here. So if he didn't have behavior issues and his cognitive level was higher, he may be able to go, you know, to a different, less restrictive environment._

**Category 2: perception of preparedness to work with this child.** All therapists responded to some degree on their self-perception of how prepared they would be to work with this child. This was embodied in statements related to: their familiarity with deafness, their ability to articulate a clear plan of therapy for the child in the case study, skills they would bring to their work with this child, references to their background and training as it would relate to this child, and clinical areas they would need to further develop to meet this child’s needs. Case study responses generally supported participants’ statements in interviews. For example, all 4201 therapists expressed confidence in their ability to provide high-quality services for this child and felt that their background, training, and clinical skills would be sufficient. Indeed, when asked if they would need to supplement their current knowledge and skill set to work with him, the only additional skill
these therapists felt they might need develop was their ability to speak Chinese, which was listed as this child’s home language. These therapists were all able to articulate a clear plan of intervention, such as the one outlined by a therapist below:

In this case I think working with the parents would be really important. Obviously I would work on his listening, speech sound discrimination skills. I would work on language through sign language. And once he was at the [necessary] level, I might do some speech-reading...or work on functional listening things with common phrases that [he’ll] hear throughout the day. That’s actually part of my listening check, I’ll do the Ling 6 [Sound Check] but then I’ll do phrases so that they can practice identifying those phrases through listening, because they’ll hear them throughout the day...For speech [production], from this [case study description] I would say I would have to do more assessment to see a little bit more but I think this is probably a visual kid so I would use a lot of visual strategies. Maybe I’d use PROMPT [a tactile-kinesthetic method] or Cued Speech.

Another 4201 therapist, who claimed to have worked with children similar to the one in this case study, provided a very detailed plan of intervention:

The first thing we find out is how the family is communicating with the child. We need to know what they’re doing at home so we know what to expect here...If he were to come into my room next week, I would do a baseline of all his skills. I would see if he does play audiometry...I would have him play with sound and see what of the Ling 6 sounds he responds to behaviorally...I need to make sure he’s MAPped correctly...I would also begin the SPICE (a listening evaluation and curriculum tool), to see if he can tell me the difference between an intermittent and a continuous sound, can he respond to his name? I’ve we're walking down the hall and I call his name, is he gonna look at me? If we’re playing a game and I call his name, is he gonna look up? ...Other things...what sounds he produces, first during play – what do I hear him say during play? What is his phonetic inventory naturally? So I really look very carefully at that, to figure out what his phonetic inventory is. What his syllable shapes are. Can he imitate /a/ when I ask him, can he imitate /m/ when I ask him. It says [in the case study] that he uses speech-reading skills, so I’ll look at that with body parts, colors...see if he’s really speech-reading or is he guessing what people are saying? I would do some language testing, but I don’t like to jump into testing right away, I would rather establish a rapport through play and figuring out what his vocabulary looks like. Does he have some animal names, does he have food names? And then look at his ASL skills. What does his conversational competence look like? Does he answer questions, does he make good eye contact?
Both quotations demonstrate not only the breadth, but the depth, of clinical practice that 4201 therapists bring to their students. It is important to note that several of the skills, tools, and methods these quotations mention are not those that a typical therapist (one not trained to work with children with hearing loss) would possess. For example, speechreading techniques, cued speech, visual phonics, and the SPICE curriculum (all mentioned in previous quotes) are not typically taught in graduate speech-language pathology programs. They are part of a “toolkit” that typically only professionals working with children with hearing loss would possess. These therapists felt equipped to work with the child in the case study because he was similar to many of the students to whom they currently provide services. This assertion was overwhelmingly expressed by 4201 therapists in quotations such as the following:

That’s about right, I’ve seen this before. It doesn’t have to be Chinese, we have a lot of children that are coming from Africa, they’re coming from Yemen, they’re coming from different places.

As one of these therapists stated, “[This child] is like a mixture of all the kids that I have here.”

Within both the BOCES and LSD groups, the therapists’ preparedness to work with this child seemed to be a function of the setting in which they worked, meaning that those who work in settings that provide self-contained classes and programming for children who use sign language reported feeling prepared and were able to articulate a more appropriate plan for the child, while those who have worked only with children who use spoken language felt this child would have to be seen by a different therapist in a different program.
Several statements demonstrate this distinction. For example, the following quote is from a therapist in a large urban district who works with children who use total communication:

Since he is signing you make sure that you are signing or that you have someone to help him understand what you are saying (an interpreter) and to help you understand what he is saying. But you’d want the parents to be involved too...You’d give him a sound check, you’d want to start with some bilabials (speech production) to see if he’s able to do it with a vowel – like a consonant-vowel [combination].

This quote emphasizes the importance of the therapist knowing sign language, not just for therapeutic purposes but to establish basic communication. While she suggests the possibility of using an interpreter to assist in communication, most therapists would agree that direct communication between client and clinician is critical for establishing rapport and developing a productive working relationship. This therapist also noted the similarities she has seen between her caseload and this child’s description:

A girl here, her family only speaks Spanish, but she learns English here, and she primarily uses sign to communicate because she has poor speech intelligibility...She has a cochlear implant that she got at age nine and she has a hearing aid, but it doesn’t always help her.

In contrast, the two other local school district therapists who work only with students in a mainstream environment both expressed concerns with the child’s potential placement in their setting, as well as their abilities to meet his needs. The therapist from a suburban district revealed that she would not feel comfortable working with this child, and that he would in fact most likely be referred to her district’s “special education” classroom.
I don’t know sign language...I’ve never worked in a setting like this...so this is sort of out of my comfort zone...And my kids are not severe, or anything like this. So I’m not really great - again, I don’t know any sign language. Probably if you went to the people at the schools for the deaf, they’re not going to have this issue. This is totally out of my purview.

This quote is from the same “outlier” to which the researcher has referred before in this chapter. It is clear to the researcher that this therapist is representative of the numerous highly qualified, hard-working and effective speech-language pathologists who work in schools throughout New York State. She spoke throughout her interview of the time and effort she devotes to communicating with parents, partnering with classroom teachers, and providing the best possible services to her students. Again, the fact that she and therapists like her around New York State could suddenly be faced with working with students like the one in the case study should the “4201 schools” be closed cannot be ignored. Implications of this will be discussed in Chapter V.

**Category 3: references to alternative programs for this child.** Seven therapists referred to alternative programming available in their community to children with disabilities. 4201 therapists exclusively referred to these options as being insufficient for the needs of this child, arguing that therapists in public schools could not offer appropriate therapy. They also feared that the tendency of public schools to place students in groups of three-to-five for speech therapy would prevent therapists from providing high-quality services to children like the one in the case study. One therapist describes her concerns below:

I’m not saying anything derogatory about the public school therapists because they certainly have a lot more differentiated kids than they used to. But to go into an articulation group, you can pretty much be scripted and come in with a game, it’s not rocket science. Working with profoundly deaf
children] takes a lot more differentiation, it’s all individual. It’s not like you can take a group of our kids and do a group. Our kids are tough, you can’t just to /s/ (articulation) work.

Another therapist described a session she had observed, in which a therapist’s limited knowledge of sign language impacted her ability to work with a deaf student:

I observed a session when I was in college. And the therapist was trying to teach past tense. The child kept signing “RUN-FINISH.” And the therapist kept saying “Why are you signing ‘finished?’ It’s not finished.” And the child kept signing “RUN-FINISH” in ASL. The therapist did not understand that he was using the past tense (a verb plus the word “finish” indicates past tense in ASL.) And if you don’t know that, how are you going to teach?

Local school district therapists agreed with the 4201 therapists that placement in a public school would be difficult for the case study child, mainly because of the many factors, including communication mode and present level of functioning, that would prevent him from succeeding in a regular education environment, even with support. They described self-contained classes for children with behavioral and emotional disabilities, as well as classes for children with cognitive disabilities, that are available in their districts; however, all therapists noted that while this child was described as profoundly deaf and presenting with significant language delays, he did not present with any intellectual, emotional or behavioral disabilities. Their responses indicated agreement, therefore, that he would not be appropriate for their districts’ self-contained classes. This is another important point to emphasize, because on the surface a child with limited spoken language skills could be suspected to have an intellectual disability, delays in pragmatic skills, or even to be on the autism spectrum. Without an appropriate placement in the district for children with profound hearing loss, this child could be
placed in a class with peers whose intellectual abilities are far more limited than his, and where he wouldn’t get the necessary exposure to sign language and spoken English to stimulate his language development. Below, a quotation from a therapist in a large urban district that does not offer self-contained classes for the deaf describes where he thinks this child should be placed:

Is there an option for a school for the deaf? Because that’s where he should be. People say “Why is he in a school for the deaf?” There is still a need for schools for the deaf...In this geographic area, without the school for the deaf right now, he would be, whether it was through a BOCES program or the city schools, he would be mainstreamed with a teacher of the deaf as a support person. No. I would hate to see this kid without a school for the deaf. There is still that need.

The therapist from the suburban district, who stated in a previous section that there would be no place for this child in her district, gave a description of the financial support and parental environment that enables students with disabilities to be successful:

One of the nice things about [this county] is, we have lots of services and we have families who, not all, but really can afford, and I don’t mean just financially, but can afford themselves a lot of these wonderful early intervention services. They all go to doctors, they all have support. They know to write to their school district and there’s lots of information out there for our parents that they know how to go around getting services...I’m blessed to work in a school district like this...and in this school particularly, because it’s definitely the highest of the socio-economic (in the district) and very often, not always, that correlates to parents to whom education is very important to them.

This quote supports claims that have been made previously in this chapter that the socio-economic component of education, and in this case education for profoundly deaf students, cannot be discounted. The demographics of students in the “4201 schools” were described in Chapter I. Students tend to come from
families that live in poverty, have recently immigrated, and don't speak English.

While these factors don’t prohibit them from obtaining necessary speech and language services, they often prevent parents from accessing available resources and lead to late identification of hearing loss, late amplification, and a late start with intervention – three elements that can prevent a child from being able to succeed in the mainstream. If the “4201 schools” are eventually to close, these issues must be dealt with state-wide in order to ensure that these families receive the support, information and access necessary to prepare their children to be successful – both academically and socially - in an environment other than a school for the deaf. This will be discussed further in Chapter V.

**Emergent themes: administrators**

Nine administrators were interviewed for this study: one from a BOCES program for the deaf and hard of hearing, two from large urban school districts, and six from “4201 schools” for the deaf. Analysis of interviews revealed the following themes: (a) description of self, including professional responsibilities, qualifications, and past experiences; (b) description of school or program, including its mission, offerings for students, and trajectory of the school or program, and the students within it; (c) descriptions of the speech therapists on their faculty, including the services they provide to students and families and the perceived skill sets of their therapists; (d) references to outside entities, including funding sources and agencies with which they are involved; and (e) description of the ability of their program to provide high-quality services to profoundly deaf students such as those in the “4201 schools”.
**Category 1: description of self.** While the majority of administrators reported having extensive experience with deafness, this was not the case for all.

The administrator of one of the BOCES programs for deaf and hard of hearing children claimed to be new to working with children with hearing loss:

> Coming in, I know even as an administrator, I’ve been in special education for thirty years but coming in here I was very, I don’t want to say ill-prepared but I was unfamiliar with the population and for me it’s been a lot of work.

Administrators in “4201 schools” generally had a wealth of experience with the deaf population that enabled them to serve as resources for their therapists:

> I was an audiologist for ten years, and I had taken a number of speech classes at the graduate level and then switched to audiology. And when the supervisor of the department retired, I was the only one with experience in both...I get out to observe the speech teachers, just to see how the kids are doing, to offer any support that they need, any suggestions that they need for problems they are encountering with the students. I review written work, I review session notes, plans, progress reports, and I myself am the evaluator for incoming new students and triennial assessments every three years on the speech and language level.

**Category 2: description of school, program, and student body.** All administrators provided a description of their school or program, the fitness of their program to serve the students within it and support faculty members, and the characteristics of their student population.

While BOCES and local school district administrators generally reported serving a small subset of the larger population of students with hearing loss present within their districts, 4201 administrators spoke of their schools’ abilities to meet the diverse needs of the range of students who come through their doors.

An administrator in a special education “sub-district” within a large urban school district described her program in the following way:
Our district is the special education district, and it’s throughout the city, and the other districts are the local community districts, and those kids are designated regular education or up to moderate needs. And then [our district] is more the profound needs. And within that, we have the self-contained classes for the children who are deaf and hard of hearing and need that level of support.

Another administrator in a large, urban school district described the services available to her district’s students with hearing loss:

We do not have classes for children who are deaf. Children that are deaf and hard of hearing are integrated into the school program, and we bring the services to them. I have all different levels of service. I have some students who have a teacher of the hearing impaired with them all day long, one on one. I have itinerant teachers. I probably have less than 100 children in the district, in the public schools, that are deaf or hard of hearing.

The administrator of a BOCES program described her program in the following way:

We have people full-time on staff, well-trained, very experienced, especially our speech pathologists. I don’t know another program like ours in this area that integrates students into mainstream facilities and the speech pathologists facilitate that.

Administrators in “4201 schools” offered descriptions of their programs that demonstrated their abilities to serve a larger, wider, and more heterogeneous population than the district alternatives. One administrator described her program, which serves infants through twelfth graders, in this way:

We have about 100 students. The focus of the program is on language, literacy, and meeting state standards. We have a deaf infant program from birth to three years old, we have five day a week preschool from ages three to five, and then we start kindergarten which is like a regular school program. We have a SNAP program – it’s “Special Needs Alternative Program” – they’re multiply disabled children. Then we have an alternative program for children who are not on an academic track but are not in SNAP.

Another administrator describe her program:
We’re able to address the needs of so many different types of kids. We’re able to address the needs of the child who’s going to be manual, who needs maybe some speech reading instruction and a boost to his language, right up to the kid with a cochlear implant who’s gonna be listening and comprehending with a covered mouth at this level. We have the expertise to deal with all the possible ranges of communication abilities. And the time and flexibility that we have allow us to do that.

Another administrator, also at a 4201 school, described her program:

Our program includes an alternative high school program for significantly disabled students. On our campus, we have a parent infant program, we take students as young as six months, and we have the elementary component there as well, and then the alternative high school is placed at the [local high school] campus. For the parent infant program, we get the babies, and we work with students themselves, the infants themselves, as well as their parents for parent training.

Several administrators spoke of their program’s ability to support the professional development of their therapists:

Each therapist has a strength based on their own experiences. We’ve had some therapists who had a strong experience with hearing impaired children prior to coming here. We have others that didn’t, so based on their needs, the administration has been really good about putting money aside for workshops and seminars, I’ve had people come here to train the staff, we have consultants. I try to match the need with the therapist because we can’t afford to send everybody to everything...I’d like [my therapists] to be able to work with any child in the school, whether it’s a child who has oral motor issues or a child who has autism, or a child who is just profoundly deaf. I want everybody to have skills across all populations here.

Another administrator, referencing the increased amount of students at her 4201 school with disabilities in addition to deafness, spoke of the professional development opportunities her school provides to therapists:

We’ve been working with the NY Deaf-Blind Collaborative, they come in and do consultations. We do a lot of workshops on autism and deafness – comorbid diagnoses with autism.
Other administrators said that while their school did not coordinate professional development opportunities for their therapists, they encouraged their therapists to seek out their own continued learning experiences and tried to approve all requests for conferences. As an administrator at a 4201 school illustrated:

"The speech department people usually come to me and ask me if they can go to things, they find their workshops. I usually try to approve everything they ask for. Someone just went to a Phonak workshop, someone just went to an auditory-verbal workshop. And lots of technology workshops."

This focus on professional development and continuing education supports claims made by the therapists above that continued learning is crucial for working with this population. Therapists reported earlier that they needed to maintain proficiency in working with assistive listening devices and therapy techniques specific to the needs of these students.

Most administrators discussed the characteristics of their student body, including changes they've seen in its demographics. An administrator at a 4201 school serving an urban area and many rural school districts described the heterogeneity of her school's student population:

"A third of our students have cochlear implants, most of the others use some sort of hearing aids, there are a few that don't use [any amplification] but most use something. When I did the statistics recently, sixty percent of our students get Regents or Local diplomas, many go on to college, some are more severely or multiply disabled and go to group homes or a sort of shelter setting...We're getting fewer and fewer “normal deaf” children. The children that come to us have more complex needs, multiple disabilities, learning delays, academic delays. The kids I've seen recently for intakes are clearly multiply disabled. There are many babies who come to us that are just deaf. And the families need to communicate."
An administrator at a 4201 school described the breadth of communication modalities present among her students:

We have students who rely primarily on auditory oral strategies, especially at the pre-school level, and we have students who rely solely on visual, we have students who rely on auditory but require visual support, and then we have students who are mostly visual but have some hearing.

Another administrator at a 4201 school described the students at her school:

We have the special needs population, so there we have a mixture of all kinds of issues – expressive, receptive, we have a lot of apraxic kids, I don’t know why but over the last couple of years we’ve been getting more and more kids with apraxia, we have some physically handicapped kids, we have a little of everything. We have an alternative high school, we’ve got a strong ASL class with cognitively intact kids. I have kids that hear really well but have other issues that prevent them from using their hearing, and I have kids with cochlear implants that are going into mainstream kindergarten and you couldn’t pick them out from the rest of the class. So we have the whole gamut.

This description was echoed by another administrator at a 4201 school:

The “pure deaf” child almost doesn’t exist anymore [in our school]. We are seeing more and more kids with autism, PDD, various degrees of mental retardation, syndromes. So we are seeing more and more kids with special needs.

While, as demonstrated by the above quotes, many 4201 administrators noted a changing demographic among their students, one administrator did not feel that was the case at her school. The quote below describes her perspective on her school’s population:

People say “the “4201 schools” have so many more multiply handicapped kids than we used to.” We might not have as many academic kids because they’ve been pulled back to the mainstream. I’ve been here a long time, and we’ve always had kids with special needs. Maybe a little more now...so much has changed in the world, the way we can work with kids, you know a lot more with the other disabilities...and autism is being diagnosed more now than it was years ago. Twenty years ago, kids who were just a little “weird”
are now diagnosed as having autism. Well, the kid was still here twenty years ago, he just wasn’t diagnosed.

Administrators in local school district and BOCES programs did not describe their student demographic as having changed as dramatically as described in the “4201 schools”. The supervisor in a BOCES program for deaf and hard of hearing children did not specifically describe the students in her small program. However, she emphasized that the purpose of the county-wide BOCES program is to “serve the kids that the school districts can’t serve. Either profoundly impaired or very low-incidence.”

This particular BOCES program is unique among the other settings involved in this study because it exists in a geographic area in which there is a 4201 school for the deaf (that can serve the more severely disabled deaf students), as well as support services for deaf students who are mainstreamed. Therefore, the students that it serves are those who are unable to be fully mainstreamed but who communicate and academically perform well enough to function in the inclusion classroom that this BOCES program affords. This administrator shared that students in her program must be able to handle the “academic rigor” of this suburban school district, and that “students who do maybe leave here or don’t consider this as a placement and who go to the school for the deaf, the reason is social…the cultural component of it.” This refers to the notion that schools for the deaf offer a more inclusive social environment for student who need to use sign language to communicate, and provide students with a sense of deaf culture and identity that is not available in other programs.
An administrator in a local school district that does not provide self-contained classes described the deaf students in her district in this way:

Our students are mostly hard of hearing. The children that are profoundly deaf - well, now a lot of them have cochlear implants – most of them go to the school for the deaf. For the school age kids, the children with cochlear implants, it depends on how successful they are with them. We have kids with hearing aids, kids without hearing aids, kids with hearing aids who refuse to wear them. I think too many of our kids, though, I think it has as much to do with the poverty status as with the hearing impairment, that they end up not graduating, or graduating with an IEP diploma, which we really discourage now, and they end up on SSI and they can do so much more.

Another administrator in a program (called a “district”) for deaf and hard of hearing children in a large, urban local school district, described the population of students her program serves:

The majority of the deaf and hard of hearing students go to regular education or less restrictive settings, and if needed there are also 12:1 ratio classes and that’s special education, they’re self-contained, but they are in the general education. Our district only has a small number of deaf or hard of hearing kids in relation to the current number of 2800 kids who are identified with hearing loss throughout the city. We have the ones that are most severe.

**Category 3: descriptions of speech therapists and services provided.** All administrators provided descriptions of the therapists they supervised, including their skills and weaknesses, experience with deaf students, professional responsibilities, and qualifications. Administrators in 4201 programs described their therapists as having a greater breadth of skills pertaining to deaf children than administrators in other settings. Some of these 4201 administrators, citing the common core set of skills that all speech-language pathologists presumably have, noted that simply finding a therapist who knows sign language is an accomplishment and satisfies their needs. While some administrators in the other
environments (non-"4201 schools" for the deaf) described their therapists as being less experienced with deaf children, they commented on the dedication that their therapists have to continuing their learning and providing the highest possible quality services to deaf students.

This quote is from a 4201 administrator, describing the skills she feels her therapists bring to their clinical practice:

The only area I would say many of them are not sufficiently prepared would be in knowledge of sign language...Most of them are skilled SLPs, they’ve got the remediation skills for articulation and language and everything they need, but it’s the sign language that they can’t hit the ground running.

This same administrator also discussed how important it is to have therapists knowledgeable about additional disabilities the deaf students in her school might have:

We are seeing more and more kids with special needs, and I’d like someone who has that background so they can have the flexibility to work with a student like that. Knowledge of sign language is a plus, but not knowing it doesn’t rule out a [candidate] in my mind, because people are willing to learn.

Another administrator described that the skills and qualifications he looks for when hiring SLPs has changed due to the changing needs of his deaf students:

I’m looking for people now with a wide array of skills, going well beyond traditional articulation and language disorders and going into people who have experience with augmentative devices, people who have some knowledge or willingness to learn about feeding issues, willingness to work with children who [have behavioral problems], children with oral motor issues, which is an increasingly burgeoning population, and children with visual issues too.

At the same time, this administrator noted that due to the increasing population of children with cochlear implants who are on a listening and spoken
language path, these children “have to be met by people skilled in auditory verbal therapy - those techniques.”

The responses from administrators corroborated much of what the SLPs listed in their self-reported skill set. However, several considerations arose from administrator responses in this area. First, they failed to capture the vastness of the array of skills and depth of experience with deaf children mentioned by the therapists themselves. Many 4201 therapists insisted that it was in fact their years of experience with their population of deaf students that enabled them to decipher the often obscure signing style of their language-delayed students, and to modify their practice in order to accommodate the varying needs and abilities of the students on their caseload. Second, many 4201 administrators admitted that therapists experienced with their population were rare; therefore, a “willingness to learn” was sufficient for new hires. This implies that often, newly hired therapists are immersed in a clinical situation for which they are poorly prepared to even establish basic communication. However, it also implies that the “4201 schools” are a supportive learning environment in which new therapists have ample resources to accelerate their learning. Other types of programs may not be able to offer that kind of support to their new clinicians.

The administrator in a BOCES program for deaf and hard of hearing students described the skill set that her therapists need for this specific setting:

This (working with deaf and hard of hearing children) is their assignment, so this is what they focus on. The technology, the cochlear implants, the hearing aid technology that they’re dealing with on a daily basis...I believe that their ability to work in a mainstream setting is a huge asset, because they can go
into the classrooms, they can push-in, they are familiar with the [academic] content that is being delivered.

Local school district administrators did not address a skill set as broad as those in BOCES and “4201 schools”, saying they mostly look for therapists who are licensed and certified (the bare minimum requirements for SLPs to work in public schools and programs in New York State) and have an interest in working with children with hearing loss. Below is a quote from an administrator in a large, urban school district that offers both total communication and auditory-oral self-contained classes for deaf students:

[I look for] general licensure and school experiences in terms of where they’ve gone to school and what the current level of graduates [from that program] is, because different programs tend to excel at different times…As far as students with hearing loss, we work with the other schools [for the deaf] and we do hire staff that are let go from them because we do recognize the value of the experience [with deaf children] that they bring with them.

While most 4201 therapists discussed the scope of practice and the therapists under their supervision, BOCES and LSD administrators did not. This is possibly due to the small size of schools for the deaf as opposed to the comparably large size of districts and county-wide programs, such as BOCES. It is likely that 4201 administrators are able to have more interactions with their therapists than are administrators in larger programs or districts. Below is one 4201 administrator’s description of therapy goals and objectives targeted in speech and language sessions, which is in agreement with the wide variety that 4201 therapists reported addressing in their therapy sessions:

Spoken English, listening, language development sometimes through ASL, sometimes through English, but more focused on the speaking and listening part. And then for students who are more language delayed, a lot of focus on
language. For students who have additional needs – some of our students have autism – they might be working on social communication. For most students, pragmatics and conversational competence skills – how to communicate with people who do not sign.

**Category 4: references to outside entities.** Administrators frequently referred to entities outside of their school or program, including the state education department, and education funding sources, as contributing to their concerns over the welfare of their students, faculty and school or program.

Some administrators spoke of the frustrations related to financial constraints and looming budget cuts, both to local school districts and state-funded schools such as the “4201 schools”. An administrator in a BOCES program discussed how the prospect of budget cuts impacts her program:

We serve school districts. We work for them. So if they decide tomorrow – one school district for example decides to take back three students tomorrow, that would affect our ability to serve the other students financially. We have a budget just like everybody else, so if our student enrollment decreases, we have to reduce staff, we reduce the size of our program, the funding...it's ben a big issue, a big issue. We've shrunk in the past four or five years. And this program isn't any different from any other – this program has decreased enrollment as well because school districts aren't getting as much funding, they pay the tuition to us to serve these kids, and with the advent of cochlear implants they think “we'll just serve them here” with a teacher of the deaf for a few hours a week. That’s where kids fall through the cracks.

This same administrator drew an interesting connection between fiscal efficiency and accountability for academic excellence:

The school district will pay to keep a kid in district with a teacher of the deaf for a few hours a week. That may cost less than the $55,000 to send them to BOCES. But in this age of accountability as well, our students improve very much academically. So you know, you have to weigh that. Because the
school district funding is now based on school district performance. So if your performance goes up, your funding goes up.

An administrator in a 4201 school spoke of changes she has seen since the funding stream for “4201 schools” changed.

It’s unfortunate that money should play such an important role in the school because it really should be just about kids, but it’s never just about kids, it’s about money. School districts now have to make a choice about sending kids here, which they never had to do before because the state picked up the tab. Now that the state isn’t picking up the tab, school districts are questioning it. For the little ones coming in from the parent infant program, it’s not just a transition anymore, it’s a fight [to get them into the oral preschool]. But as I said, it’s not about the kids, it’s about money. So districts aren’t gonna want to pay the tuition to send the kids here when they can get an interpreter or hire a consultant at the school for half the cost. I would assume that the districts are just as strapped as anyone else, and when they see the tuition costs for sending a child here, they’re questioning it.

One administrator at a 4201 school discussed what he feared would happen to his students should the school for the deaf close and they went to a BOCES program:

It would have a dire effect if they were in a BOCES program. I see that [the BOCES programs] are so diverse. I mean, we are diverse, but we serve a population that has one common denominator, a hearing loss that is a core disability. At BOCES, they are scattered all over the sun in terms of ranges or types of disabilities. I don’t think they would meet the needs of students who are deaf really well. I believe that because we have a signing population, and still a majority of our school is sign-based, they will not meet that need. In terms of auditory-verbal therapy, our therapists have been trained. You’re not going to match those skills in the BOCES program, they don’t have the expertise or the critical mass, and these kids would be scattered all over, and there would be one child in one BOCES and another child in another BOCES and then, there is no critical mass. That’s the beauty of a center-based school for the deaf.

Another administrator at this same school, who also works as an SLP and is the supervisor of speech-language pathologists at the school, shared her feelings on this subject:
I don’t think speech therapists who work in the local school districts are equipped or have the knowledge base to work with kids like this. And I know that personally because when our kids do go into the district, I get calls [from their district speech therapists], you know “What kinds of tests do you give?” and “How do you get responses?” You know, tons of questions because they’ve never worked with a child with this significant of a hearing loss. It’s the first child on their caseload, and they don’t know where to turn, just like I didn’t my first year. So I get these phone calls all the time, “Can you give me information, where can I find resources? How do I work with this child?” I noticed in your report that you had stated this test, where can I find this test?” So I know they’re not equipped for it.

An administrator at another school for the deaf reinforced these concerns:

I know [therapists] who work in the public schools who are doing therapy in groups of five. And I’m not sure what they can get accomplished in thirty minutes in a group of five. I think the [local school district] does its best, but the bottom line is, if they can’t provide the service, they don’t. And they’re willing to take the heat for being out of compliance, but if they can’t provide it they just don’t. We’ve had kids leave [this school] go to the [district], and then not get speech services for an entire year. And then come back here. That happened with one cochlear-implanted student here. Her parents wanted her mainstreamed, they took her out of here, she spent one year in the [district] and then was right back here. [The district] said “We really don’t have anybody that knows how to provide services for her. Because she does use some signs and we don’t have [a speech therapist] who signs.” Deafness is a low incidence disability and it’s unique. And you have to know what you have to do to modify a program to accommodate these kids.

Another 4201 administrator, speaking about the paperwork she has read coming from therapists in local school districts, reiterated these concerns:

If you look at some of the IEPs that come in from school districts, where if the child was mainstreamed and then you see the IEPs and how they write the IEPs, and how they view the deaf kids in terms of language and communication, educational needs, educational supports…I guess they focus so much on the fact that the student can’t talk, can’t hear… They think that if they have their hearing aids on, everything will be ok. If they have an FM system, everything will be ok. [They] just have to have an interpreter. And that’s not true in a lot of cases.

Another administrator at a school for the deaf expressed the following opinion on the prospect of “4201 schools” being forced to close:
It would be devastating. Devastating. Public school districts don’t offer the intensity of the service we offer. Our elementary students get speech five times a week individually. And from my experience and I’ve worked for public schools for years, you don’t see that in public schools. The maximum I’ve seen in the city schools was three times a week. If the family was really advocating for the child, it was individual. Usually it’s in a group or a small group or a mix of some group and some individual. So they just wouldn’t get the intensity, the number of sessions that we can offer...Our therapists are really focused on deaf children. And out there [in the districts] no way. There are so many other speech issues, deafness is a tiny piece of the population, and that piece would mostly be missing.

**Category 5: ability of programs to provide high-quality services to profoundly deaf students such as those in “4201 schools”, and alternative programs for students.** All administrators interviewed expressed that they felt their program could best meet the needs of profoundly deaf children and discussed what they feel would be the consequences of deaf children attending alternative programs. While 4201 administrators argued that their school’s accessible communication policy and expertise in serving deaf children best equipped them to work with this population, administrators in local school districts and the BOCES program claimed that they could provide deaf students the least restrictive environment and an academically rigorous curriculum while providing the support services necessary for deaf students to be successful. Some 4201 administrators discussed ways in which their schools had risen to new challenges presented by technological advances and a changing student population. By doing so, they have been able to meet the needs of a changing student body that includes increasingly auditory learners as well as deaf children with multiple disabilities. The following is a statement from the director of a school for the deaf in a suburban county that provides special needs programming and an auditory-oral preschool program:
I think that we have always challenged ourselves to meet the needs of the students. When we did determine that we needed an auditory oral program, we knew that one of the criticisms that would be brought up was that there would be no “hearing” role models, so we developed the reverse inclusion program for the auditory program, so all the auditory oral preschool classes have hearing children in them...that, I feel, has been very successful. I think we were the first [4201] school to try that. We've been the first school to try a lot of things.

Administrators in BOCES programs and local school districts had mixed feelings regarding their programs’ capacity to expand and integrate all 4201 students into their programs, should that need emerge. The supervisor of speech-language pathologists working with deaf children in one large urban district expressed a great deal of confidence in her district’s ability to absorb students from the area’s schools for the deaf:

I think we’re fully capable of [providing high quality speech and language services to all of our deaf students.] Historically, the [district] has had to expand or contract depending on outside factors. So for example, in the 1970’s, with the Rubella kids coming into the system, there were lots of needs for more programs, so buildings were converted and staff were brought in. And as the population has changed and gone more general education/mainstream, programs have closed and locations have shifted. So this is not something new to [this district.]

While the above statement implies that this large, urban district would be able to accommodate the, perhaps, hundreds of students it would need to in the event that the area’s “4201 schools” closed, it contrasted sharply with what the researcher witnessed during her site visit to one of this district’s programs for deaf students. According to field notes, deaf students receive their speech therapy in a small, acoustically un-treated room while two other speech therapy sessions are conducted simultaneously in the same room. Considering the fact that deaf children struggle to detect and comprehend speech signals in rooms with competing noise
and that speech therapy and auditory training should be done in an “acoustically friendly environment,” a room with two other therapy sessions, often done with groups of students, can hardly be considered an ideal environment for targeting speech, language and listening skills with profoundly deaf students. According to the Alexander Graham Bell Academy for Listening and Spoken Language, professionals working to achieve listening and spoken language skills with deaf children must create and maintain acoustically controlled environments that support listening and talking for the acquisition of spoken language throughout the child’s daily activities (AG Bell Academy for Listening and Spoken Language, 2007).

Another administrator in a large, urban school district also expressed confidence in her district’s ability to accommodate students from the area’s school for the deaf should the need arise, however she expressed concern over her district’s ability to provide an appropriate placement for most of those students:

*I’d be able to pick them up, yep. Because we bill Medicaid for the speech services. I would have enough [funding] coming in that I could do it...but the problem is in this city we don’t have a school tax base. I think that would be devastating if we didn’t have that option [to place students in a school for the deaf.] That’s why I have to review all the records of kids at the school for the deaf, because I do that to make sure all those kids really need to be there. And except for a few, yes, they did need to be there.*

This same administrator expressed concerns with what she feels are limitations of the schools for the deaf. This concern, which she shared with other BOCES and LSD administrators, pertained to her belief that “4201 schools” offer a less rigorous curriculum, serve as too restrictive of an environment for many students, and prevent their students from obtaining necessary skills to function as productive citizens once they graduate.
I don’t want to say anything against the schools for the deaf, but when you get into institutions like that, I don’t think it pushes hard for the children to be financially and socially independent, and they need to be. Saying “we can live on SSI” – that should not be an option for these kids...They need to read and write – the deaf kids – at least at an eighth grade level...they need to be self-sufficient, and they need to be able to communicate with a bigger community than the deaf community.

The administrator of a 4201 school in the same region as the local school district administrator quoted above expressed her concerns and previous experiences with students being relocated to their local districts:

A lot of times, the kids get plunked into a special education classroom, they have kids – some that are deaf, some that are hearing with other needs possibly, with an interpreter who doesn’t interpret very well. You’ve got the Teacher of the Deaf who comes in every once in a while and talks to the classroom teacher about how to teach this kid, or who pulls the kid out once a week or a couple of times a week and tries to tutor them, to cram all the information in they’ve tried to learn all week. That happens a lot. Not having interpreters or not having good interpreters, or the interpreter is sick so there’s no one there for the kid that day.

An administrator for a BOCES program for deaf and hard of hearing children in a suburban county expressed confidence in her program’s ability to absorb the students from her area’s school for the deaf, should the need arise:

Currently, with the structure we have now, we have three classrooms that are 12:1:1. That’s the special education ratio. So we could have thirty-six kids, and currently we have seventeen or eighteen, so we could double our population today if we needed to. Let’s say the school for the deaf did tragically close tomorrow and we have 100 kids that we need to place, and the district says “we can’t take any of them,” we could do that. The nice thing about BOCES is we have our own facilities and our own spaces in the district.

This administrator acknowledged, however, that numerous changes would need to be made in order to accommodate an increase in profoundly deaf children:

Well, we would have to increase our staff, and we would look for staff who have expertise in the deaf/hard of hearing population. We provide professional development to our current staff, we would have to increase our
audiological staff – currently we have a consult model with that – we would have to increase that and have someone in-house. Really, it’s just increasing the number of staff, looking for specialists in the field, and providing high-quality professional development.

A therapist working in a BOCES program in a suburban county, whose administrator could not be interviewed, expressed that, while the BOCES program could accommodate an increase in students, that closure of his area’s two schools for the deaf would impact his BOCES program:

The BOCES program probably would be able to handle that type of a setting if they were going to take all of those students in...If the need is there by the districts, they will always work to provide the services for it. But it tends to be very individualized and a district may only have one student in the entire district who goes to [the school for the deaf], so if [the school for the deaf] closed, they would then put them more than likely in a BOCES setting if they were severe... but all the support services they would have to bring in would be something that usually they don’t even have the resources to do.

Administrators in programs outside of “4201 schools” expressed that, while schools for the deaf may have their place, for many students in their districts a less restrictive environment, such as the one a local school district or BOCES program can provide, would be more appropriate and more beneficial.

An administrator in a Western New York local school district said the following with regard to her area’s school for the deaf:

I think the school for the deaf has its place...I think they’re taking more “agency-type” kids – the multiply disabled – and I don’t think it’s a true program for the hearing impaired anymore. I had to go through all the records of all the kids we have at the school for the deaf. And a couple of them, we are bringing back to the District. They’re calling it “functional deafness,” but they’re not deaf at all. It’s a language issue and we can address that in the public schools and we can address it very well. And [the school for the deaf] says “We’ll take them for one year, work it out and send them back to you.” And I say “No, these kids should not be around children – they’re not around any typical peers. They shouldn’t be around deaf children all the time. They should be around the general education setting with supports.”
The administrator of another large, urban local school district echoed concerns that some of the children in the local schools for the deaf would be better served by the public schools:

We're all aware that many of the students [in the schools for the deaf] have additional disabilities. And so there are students that perhaps may be in a school for the deaf setting that wouldn't necessarily end up having as their main disability hearing loss...[should the schools for the deaf close] they may end up going into a setting that may be more appropriate because autism may be considered their primary disability. Or there may be students that have severe emotional disabilities, so those students would go to programs where that might be their primary disability.

The administrator of a suburban county BOCES program had the following perspective on the juxtaposition between BOCES and her area’s school for the deaf:

What I believe is that here we provide higher-level academics, I'm sure of it. I also believe that we provide a real setting, a real-life setting. So deaf kids have to function in a hearing world, and here we enable that, we facilitate the development of skills to do that. I believe that the students who do maybe leave here or don't consider this as a placement and who go to the school for the deaf, the reason is social. The cultural component of it. Many of the parents of the children at the school for the deaf are also deaf, so they appreciate that culture. I've seen the results, academic results, compared the school for the deaf to ours, and ours are higher. The rigor, the academic rigor – we've had several students who were at the school for the deaf come to us, and that’s the primary reason for the parents, the academics are not as high-level, the students aren’t as challenged. Socially, it's wonderful for them, but those academics are lacking.

Below, the most salient quotes from therapists and administrators within each category are presented in table format.
Pathologist Interviews

Category 1: Description of School or Program

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<th>4201</th>
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<th>LSD</th>
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<tr>
<td><strong>P1 and 2:</strong> Accessible communication leading to social benefits, school fosters Deaf culture and identify, spectrum of educational placements available</td>
<td><strong>P1:</strong> Use any means necessary to teach and communicate; no self-contained classes for deaf children due small amount of deaf children. Housed in a public school.</td>
<td><strong>P8 (Special Education “District” within large, urban school district):</strong> Isolated, minimal interaction with other students; different types of programs in different communication modes available throughout district.</td>
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<tr>
<td><strong>P6:</strong> Spectrum of placement opportunities utilizing various</td>
<td><strong>P7:</strong> Use a spectrum of communication modalities, depending on needs of child; self-contained classes or mainstreaming</td>
<td><strong>P3:</strong> Communication philosophy not addressed, attendance at school requires spoken language; no range of</td>
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communication approaches, depending on needs of the child. 
P9: “Free and open” communication, all students able to communicate with peers and faculty; school is supportive with professional development for staff.
P14: Bilingual (ASL/English) philosophy, reflecting communitarian approach to education.

options; access to numerous support services including interpreters, resource room, 1:1 and mainstream; “culture within a culture.” Housed in a public school.

programs offered for deaf students; school district supported therapist’s continuing education in related areas.
P13: Communication philosophy not addressed; no spectrum of programs available, all students mainstreamed with support.

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**Category 2: Job Description**
**Category 3: Characteristics of students and their families**

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<th>4201</th>
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<tr>
<td><strong>P8 (Special Education “District” within large, urban school district):</strong> Isolated, minimal interaction with other students; different types of programs in different communication modes available throughout district.</td>
<td><strong>P1:</strong> Typical day involves speech and language therapy with children with a variety of disabilities, not just deaf children. Very few deaf children on caseload. <strong>P7:</strong> Parent counseling on realistic expectations for cochlear implant, frustration with parents wanting auditory verbal methods for child when not appropriate. In addition to work in deaf program, works two days a week with typically-hearing children.</td>
<td><strong>P3:</strong> Majority of caseload involves children with typical hearing. With her one deaf child, works on auditory memory and spoken language; serves as resource to student’s parents and other teachers regarding listening technology; pleased with involvement of student’s parents, pleased with supportive school system. <strong>P8:</strong> Works on functional communication with deaf students; frustrated with poor parental involvement. Limited experience working with deaf children. <strong>P14:</strong> Works on troubleshooting listening devices</td>
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</table>
All therapists reported variability among their populations, including children using a variety of communication modes, children whose home language is not English, children who recently immigrated to the US, and children with a range of spoken language skills.

**P12:** Spectrum of deaf children, including those who are culturally Deaf and very “visual,” those who use Signed Exact English, those who are bilingual, and those who use various assistive listening devices.

**P14:** Many deaf families within the school who don’t want their children speaking English; some parents who want their children to have cochlear implants, some children with autism.

**P6:** Diverse, every child has different needs and functions at a different level.

**P1:** Paucity of deaf children; most children in his program have other disabilities (not deafness).

**P7:** Variability in caseload. One student uses American Sign Language; other students are hard of hearing; some have additional disabilities; some have auditory processing disorders.

**P3:** There is no variability in this caseload among deaf students – therapist has only one deaf student and he functions on par with his typically developing peers.

**P8:** Variability among caseload: some students with additional disabilities, children of immigrants, students with emotional disabilities.

**P14:** Not much variability among deaf students on caseload. Some students perform below-average, but all can function in the mainstream.

### Category 4: Sense of Self as a Professional (Preparedness and Skill Set)

| 4201 | BOCES | LSD |
P6: Attended graduate school at a training program geared toward working with deaf students; clinical internships were with deaf children. Knows ASL, cued speech, and troubleshooting techniques for assistive devices.

P12: Has thirty years of experience working with profoundly deaf children. Feels she has learned patterns over the years and knows what she’s doing with this population.

P2: Fluent in ASL. Numerous years of experience with deaf children, which equipped her with the skills to better meet their needs.

P10: In addition to years of experience with deaf children, has learned how to counsel students on the difficulties of being the only deaf person in their families.

P14: Fluent in ASL, has been preparing for work with deaf children since high school.

P1: Gained experience with deaf and blind population in graduate school, has worked with some deaf students in his program but reportedly not those typical of the “4201 schools”.

P7: Has worked with deaf children in some capacity throughout her career; most of her students have been deaf with additional disabilities.

P3: Had a steep learning curve when began working with deaf student; after a year, began to feel comfortable with FM and CI technology.

P8: No experience with deaf children prior to current position; reported that she had a steep learning curve when she began to work with deaf population.

Category 4a: Reported Skill Set

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All therapists reported knowing sign language, being able to quickly adapt their techniques for different ages of children and levels of functioning, can troubleshoot the listening technology, felt arms with skills they had honed through years of experience with deaf children, are able to modify the complexity of their language (in sign or English) to help their students understand.

| P7: | Detailed a skill set similar to that of 4201 therapists, including knowledge of multiple communication modes, ability to adjust to different types of children, and years of experience which shaped her skills. |
| P3: | Skills include ability to troubleshoot FM equipment, test the FM, change batteries, teach other faculty about FM. Required a year of learning to feel comfortable with student’s devices. |
| P8: | Skill set similar to 4201 therapists, but reported less need for auditory rehabilitation skills, since students are not auditory learners, and only works with one age group – middle schoolers. Required a year of learning in order to feel comfortable with the population. |

### Category 5: Changes Related to the Field of Hearing Loss

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All 4201 therapists commented on changes they had noticed in the deaf student population, including increasing prevalence of additional disabilities, larger immigrant and non-English speaking family representation, and changes in technology and methods for teaching deaf children.

P12: Fewer “normal deaf kids,” has seen population decrease and diversify to include more immigrant students and children with limited cognitive capacities. At the same time, technological advances such as the CI have led to more auditory and speech production work. The school has adapted to these changes by creating a CI program and investing in CI trainings for SLPs.

P5: When first began at the school, all children used sign. Now many kids “hear better than [she] does.” Therapists can now use standardized tests the way they were intended because they can be administered to her students who use spoken language. CI has changed the way she practices speech therapy.

P10: Changes in technology have given her a “different perspective” on how to work with deaf children auditorily.

P7: Has seen changes in legislation during her career (including IDEA) that brought deaf children out of specialized institutions and into the mainstream and county-wide programs such as BOCES, which provide a less restrictive environment.

P13: Changes in federal legislation (IDEA) led to a disappearance of self-contained classes for the deaf. All deaf children in the district are mainstreamed, and the teacher of the deaf is a support person, rather than a lead teacher.

Category 6: References to Outside Entities

| 4201 | BOCES | LSD |
**P5:** frustration with local school district's reluctance to allow preschool students to stay in her school's auditory-oral preschool, despite the fact that students make great progress.

**P13:** Feelings of frustration that the local school district doesn't understand the extent of the disabilities of students in 4201. Feels the district expects faster rates of progress, but students have such severe delays and their language ages don't match their chronological ages.

**P6:** Feels that evaluation reports she has received from the LSD have been inadequate, assessment tools have been inappropriately administered without using the student's primary mode of communication.

**P14:** Reported that there are a paucity of alternative programs to her 4201 school in her geographic area.

| **P1:** Feels that his area's schools for the deaf serve the needs of deaf students in his county. Reported that his program would be unable to provide a self-contained class for deaf children because there is no critical mass and his program wouldn't have the resources to serve the small amounts of deaf students. |
| **P8:** Reported that families of her students have chosen to enroll them in a public school program as opposed to a school for the deaf because they want the students to learn spoken English (despite the fact that all students in this class use sign language to communicate.) |

**P13:** Shared that he feels his area's school for the deaf serves a critical role for the deaf students who can't succeed in the mainstream.

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**Case Studies**

**Category 1: Appropriateness of therapists’ particular program for the child**
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<tr>
<td>All 4201 therapists reported that an appropriate classroom for this child exists in their school.</td>
<td>P1: Felt that his program would be better equipped to service a child like this than the public schools.</td>
<td>LSD therapists provided varying answers regarding their schools’ appropriateness for this child.</td>
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**P6:** Program has a range of options along with a communication spectrum that accommodates all deaf children  
**P4:** Described a specific classroom in her school that could accommodate this child, expressed familiarity with “this type of child,” has worked with children fitting this description before.  

**P3:** “He would never be in this school.” Reported that there is no place for this child in her district, unless he would be placed in a special education class, which is not appropriate for his cognitive abilities.  

**P8:** Reported that there are self-contained classes for this child in her district, but that many of the children in them have behavior issues, and she felt they wouldn’t be good placements for him.  

**P13:** Said the district would need to create self-contained classes to accommodate children like these, and hire new teachers. His district does not currently have the infrastructure to accommodate him.

**Category 2: Therapists’ Self-Perception of Preparedness to Work with this Child**
All 4201 therapists considered themselves well-prepared to work with this child. Those who had less experience with children fitting his description reported that their schools provided the support, mentoring and continuing education they needed to learn quickly.

P5: Shared that she has experience working with deaf children whose home languages are not English, similar to the child in the case study.

P6: Reported an ability to teach speechreading, perform listening checks, work on functional listening activities, knowledge of the auditory hierarchy, assessments, and could use alternative, evidence-based methods such as PROMPT and cued speech.

P14: Gave a broad and detailed outline of what she would do with this child, including evaluation of all skill areas, developing audition and speech production, teaching sign language and speechreading.

P1: Reported that he has seen children like this before, and feels he has the sign language skills and knowledge of CIs to work with this child. Said he would plan to prioritize communication and language development, in any mode of communication possible.

P7: Was able to outline a clear plan as to how to work with this student, including use of sign language. Said she would be able to target his spoken language abilities through visual means. However, reported that without experience, she would not be prepared to work with this child.

P3: Said she had never worked with a child like this, she does not know sign language, and working with him would be outside of her comfort zone.

P8: Said she would need an interpreter to work with this child and his family, due to the language barriers.

Category 3: References to Alternative Programs

<table>
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<tr>
<th>4201</th>
<th>BOCES</th>
<th>LSD</th>
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<tbody>
<tr>
<td>P12: Feels that this</td>
<td>BOCES therapists did</td>
<td>P3: reported that families</td>
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population requires more differentiated instruction and therapy than what the population in public schools typically requires, which is usually straightforward articulation cases.

**P14:** Reported that she once observed a therapist in the public schools who had poor sign language skills, and the session reportedly was impacted negatively. Feels that therapists who don’t know sign language should not work with deaf children who need sign language.

<table>
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<tr>
<th>not refer to other types of programs when discussing the case study.</th>
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in her school district tend to have a lot of financial and informational resources, and many children with disabilities have received services through early intervention prior to beginning school.

**P13:** Said that this child should be in a school for the deaf. Feels there is still a need for the schools for the deaf.

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**Administrator Interviews**

**Category 1: Description of Self**
### Category 2: Description of School, Program and Student Body

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<tr>
<th>4201</th>
<th>BOCES</th>
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<tr>
<td><strong>A2</strong>: Has been working at current school for 25 years, and started as a speech pathologist. Reported that it took her a long time to develop the skills she needed, and pursued professional development and sign language classes to hone her skills.</td>
<td><strong>A3</strong>: Has had thirty years of experience with special education, but none with deaf education – reportedly felt unfamiliar with population when began working in current capacity</td>
<td><strong>A4</strong>: Began her career at a school for the deaf, has had &quot;extensive, hands-on&quot; experience with deaf children using total communication. <strong>A7</strong>: Worked as a speech pathologist, then department chairman, then supervisor, and now is director of speech and hearing services for the school district. No direct experience with deafness.</td>
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**A5**: Extensive experience with deaf children, had been an audiologist before becoming the speech and language supervisor.

**A1, 2**: School offers an alternative middle and high school, auditory-oral parent-infant program, parent training, and various types of elementary school classrooms. Have numerous students with multiple disabilities.

**A5**: Feels that SLPs at school have the time and flexibility necessary with each student to meet each child’s needs, including students who sign and students who are auditory learners. She is able to pair therapists with

**A3**: Program offers academic rigor and integrates deaf students into the mainstream with supports. Audiologist visits program weekly to address problems with hearing aids, FM and CI.

**A4**: Supervises a special education “district” within a larger, city-wide school district. District provides full range of educational settings, including both auditory-oral and total communication self-contained classrooms.

**A8**: District has no self-contained classes, deaf and hard of hearing students are integrated fully into the school program with supports. Most children in district with hearing loss are hard-of-hearing, not deaf. Feels that poverty is main
students based on their strengths.

**A6:** School offers a spectrum of programs ranging from deaf infant program to preschool and kindergarten, special needs program and vocational track program. 1/3 of students reportedly use CI, many students have hearing aids, several have no amplification. Increasing representation of students with multiple disabilities.

**A8:** Reports that school has a “gamut” of children, including children with apraxia of speech, children with physical disabilities, high-functioning ASL-users, students with CIs who go to mainstream schools following preschool. Fells that her student population hasn’t changed much over the years, has always involved children with multiple disabilities.

**Category 3: Description of SLPs and services provided**

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<tr>
<th>4201</th>
<th>BOCES</th>
<th>LSD</th>
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<tbody>
<tr>
<td>A1, 2: Therapists have an</td>
<td>A3: Reported that</td>
<td>A4: Tries to hire staff who</td>
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</table>
array of skills, including ability to work with augmentative communication devices, feeding problems, behavior difficulties, those who can work with deaf-blind children and deaf children with oral motor issues. Therapists also receive ongoing training in auditory-oral techniques.

**A5:** Thinks all therapists are well-prepared, although reported that many enter without sound language skills and require time in order to be able to communicate effectively with children.

**A8:** Reported that therapists work on spoken English, listening, language development through ASL, social communication, pragmatics, teaching life skills and functional communication.

therapists in her program have been assigned to work with children with hearing loss, so they focus their continuing education on that. They deal with technology on a daily basis.

have experience with deaf children, which she reports is difficult to do.

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### Category 4: References to Outside Entities

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<th>4201</th>
<th>BOCES</th>
<th>LSD</th>
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<tbody>
<tr>
<td>A1, 2: References to</td>
<td>A3: Referenced budget</td>
<td>A4: Suspects that a</td>
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</table>
funding and issues with the local school districts, with whom they have to “fight” to keep their students in the school for the deaf. Also referenced their county’s BOCES program as being a poor placement option for his school’s students, due to the lack of a critical mass of deaf students.

A6: Feels that public schools don’t offer the frequency and intensity of therapy services that her school does, and that public school therapists are inexperienced with deaf children.

A8: Feels that public school personnel are not familiar with deaf children and don’t offer deaf signing children the opportunity for social language learning from their peers and teachers. Reported having read inappropriately-written IEPs on deaf students from LSD.

issues and the state education department, along with concerns that if enrollment decreased, her program will have less funding. Feels that school districts, for financial reasons, are choosing to keep children in home districts rather than send to BOCES, which is more expensive, even though her students reportedly perform well academically. Suspects that primary reason parents send their children to 4201 school is for socialization.

number of students in the “4201 schools” have a primary disability other than deafness (deafness is their secondary disability).

A7: Feels that the area’s 4201 school targets mainly deaf children with multiple disabilities; reported that most of the children in the local 4201 school are appropriately placed.

Category 5: Ability of programs to provide high-quality services to profoundly deaf students such as those in the “4201 schools”, and alternative programs for students

| 4201 | BOCES | LSD |
**A1, 2:** Reported on changes in their school's culture and methodology in response to increasing use of CI and parent demands; school now provides an auditory-oral preschool program with a reported 90% mainstreaming success rate. School also provides an alternative middle and high school, a range of elementary school classroom options, and special needs programming.

**A6:** Feels that school provides skilled teacher and therapists, accessible communication, and a spectrum of academic options and activities that are appropriate for all the students.

**A8:** Feels that her students benefit from being able to communicate with every faculty member, can establish friendships, have accessible recreational activities and academic support. Reports that her school can address the needs of every child in their school, regardless of communication mode.

**A3:** Feels that structurally, her program could absorb many 4201 students immediately, but would have to increase her speech and audiology staff. Feels her program provides “higher-level academics in a real-life setting.

**A4:** Reported that historically, her district has been able to expand and contract depending on the needs of its students. Thinks that, due to prevalence of additional disabilities among 4201 students, that a public school placement could benefit some by providing a more appropriate placement for certain disabilities.

**A7:** Felt confident that she could absorb the 4201 school’s children if necessary, but expressed concern that her district is under-resourced and many of the 4201 students need to be at the school for the deaf. Thinks the general education environment is the best setting for children with language disabilities.

**Section 3: The Murky Skill Set**

To remind the reader, the following research questions were explored in this study:
1) Do speech-language pathologists (SPLs) working with profoundly deaf students with characteristics typical of those in the “4201 schools” possess a specific skill set?

2) Do speech-language pathologists in the Board of Cooperative Educational Services (BOCES) deaf and hard of hearing programs, and in local school districts possess this same skill set?

3) What are the consequences for profoundly deaf children who receive services from speech-language pathologists who do not possess this skill set?

4) What would be the trade-offs involved in removing profoundly deaf children from their service providers in specialized schools for the deaf in order to be placed on the caseloads of speech-language pathologists in BOCES or local school districts?

As detailed in the previous section, participants interviewed for this study reported a wide variety of skills that they either brought to their work with deaf children or developed in response to an emergent need to work with deaf children. However, this skill set varied among therapists. The therapists in “4201 schools” demonstrated having the broadest skill set, as most of them reported the ability to use multiple communication modes and target numerous types of outcomes with deaf students, ranging from functional communication skills, speech reading and written language to higher-level language processing, auditory skills and spoken language development. In other settings, the skill sets reported by therapists were much more specific, and analysis revealed that a particular therapist’s skill set was a function of his or her experience with particular deaf clients. Some therapists in
mainstream settings had little-to-no experience working with students through signed communication; others worked mainly with children through total communication. Among the BOCES and LSD groups, one therapist in each group had caseloads comprised primarily of deaf students; the remaining therapists in these groups worked with few, if any, deaf children in a given year.

Therefore, in response to the first research question, the researcher concluded that there does indeed exist a skill set that speech-language pathologists possess who work with children typical of the “4201 schools”. However, in response to the second research question, this skill set exists to varying degrees among professionals in each setting, depending on certain factors such as: (a) degree of experience working with deaf children; (b) breadth of types of deaf children, listening technology, and communication modes with whom they have experience; and (c) the conduciveness of each therapist’s employment setting to continued experience with deaf children and relevant continuing education opportunities.

Each therapist in the LSD and BOCES programs had some of the skills reported in the list of “skill set,” but their skill sets were more narrow than those of 4201 therapists, meaning that they most likely could not serve all deaf children, especially considering how diverse the populations of “4201 schools” are. Therefore, it is important to emphasize that while all therapists reported some degree of skills needed to work with some types of deaf children, only 4201 therapists consistently reported having the skills needed for the wide variety of issues with which 4201 students present. Among therapists in BOCES or LSD
programs, only the therapist who had direct and long-term experience with students (a Master’s degree in deaf education and thirty-three years of experience with profoundly deaf children) who shared characteristics of 4201 students had developed the necessary skills to provide comprehensive services to them. The others all reported feeling under-qualified and needing long periods of time in order to gain whatever skills they felt they currently possessed.

Section 4: The Skill Set in Context

While the researcher was able to glean through interviews which therapists felt strongly skilled in aural rehabilitation techniques and which did not, the question of “who has the best skill set” became less significant as it gave way to a new question: “How does one obtain this skill set?” Therapists came from a depth and range of backgrounds that the researcher had not anticipated. For example, several therapists reported on a long-existing passion and desire to work with deaf children that had influenced their course of study and accumulation of clinical experience with the deaf population, strengthening their abilities to serve them.

A therapist at a school for the deaf shared the following:

When I was ten years old, I started signing. So that has been my focus ever since. And then when I went to college, they knew that was my focus, and they tried to find [deaf clients] for me to work with. For my graduate program, I had training in Boston under Dr. David Luterman, so I had training for the counseling and all of that. And then in graduate school, I was hired in my second year to work with the deaf babies. So I got to work in the clinic there with the deaf babies. I’ve always been around deaf babies.

Another therapist at a school for the deaf shared how her background in sign language and with deafness influenced the trajectory of her career:

I was in a program for Interpreter for the Deaf. So I had sign language skills. My grandmother was deaf, so I had sign language skills, and I was a speech
pathologist, so [this school] kind of recruited me. And you know what, at my other job, they used to say “Oh, you’re a ‘lifer’” because I had been there for eleven years and they said I would be there for all eternity. And I said “Yeah, the only place I would go is to the school for the deaf, if the school for the deaf calls me, I’ll leave.” And they called, so I left.

A therapist in a local school district, who also has a background as an audiologist, shared how his experiences in graduate school helped to shape his skill set:

I went to Washington, DC where I began my audiology program at Gallaudet College, very ignorant of the Deaf World because I had come out of a very mainstream Speech Pathology program in college... Anyway, during the two year program at Gallaudet and the summer between the two years, I interned at National Technical Institute for the Deaf...so I did the summer orientation where we assessed all the incoming freshmen for the following year. And updated hearing aids. The assessment was done on their speech needs, their communication needs. We updated everybody's audiogram, we looked at everybody's amplification systems. We assessed everything – voice quality, articulation, intelligibility, lipreading.

A therapist at a BOCES program spoke of her life-long desire to work with deaf children:

Coming out of Gallaudet, all I wanted was to work with some hearing impaired kids. I left college, went straight through, I went to the teacher of the deaf program and went there and the first job I had was as a classroom teacher for special needs kids. I left there and went to the Detroit School for the Deaf. I left there, went to Lexington School for the Deaf, before coming here. So I would say that in my thirty-three years, I've worked with deaf, hard of hearing, it runs the gamut.

An administrator said she believed that in general, unless they take a personal interest in the hearing impaired population early on, most clinicians are poorly trained to work with children with hearing loss.

I feel that most people find a passion for this population and focus on it, and if you don’t find that passion, there’s no exposure or very little exposure to it.

Another administrator in a local school district spoke of the difficulty finding therapists experienced with this population:
Well, aside from general licensure and academic preparation, the biggest thing I look for when hiring is that they have a designated passion for and experience working with the deaf. And that's not easy to find, because it's a low incidence population.

There were therapists in all three groups that came from backgrounds that did not include work with deaf or hard of hearing children, but claim that they were able to “learn the ropes” through a combination of mentoring experiences, continued education, and ongoing experience with the population. Examples of these learning opportunities are presented through quotes below. It is important to address, however, the greater opportunities that therapists who work in center-based programs for the deaf, such as “4201 schools”, have for learning about the population as compared to their counterparts in local school districts, who may be relatively isolated from this population and see only a handful of students with hearing loss throughout their careers. Several therapists and administrators in “4201 schools” mentioned mentoring opportunities they afforded to newly hired therapists, as well as sign language classes that the schools offered for free. All 4201 therapists spoke of the added benefit of being able to work as a team and get feedback from their colleagues and knowledgeable supervisors. Returning to the “outlier” who was mentioned earlier in this chapter, the concern arises again that should “4201 schools” close and local school district therapists gain responsibility for providing these students services, the kind of collaboration and mentoring that has provided assistance and support to less-experienced 4201 therapists would not be an option for therapists in the local school districts.

One therapist at a 4201 school had not previously worked with deaf or hard of hearing children prior to coming to this school three years ago. Her specialty
throughout her career had been with patients with dysphagia (swallowing disorders.) She described how the support system at her 4201 school, combined with her desire to learn, shaped her skill set:

I’ve been working at this school for three years. I have not had any experience prior to this [with the hearing impaired population], but what I did to prepare myself for this was, I came and I looked at this population, I went and had a tutor come to my home and teach me sign language. So I did that for a whole summer so that when I did come in September to work with this population, I had then at that point already been a signer so I was able to communicate with the children. And then relying on my background as an SLP and communication, I was able to work with these children. When I first came here, I had a huge learning curve so they gave me the babies. So we were learning together – the basic nouns and verbs. Now I’m with the bigger children and we are signing away, so the learning curve absolutely was there at the beginning. It gets better every year. There were a few things that we do here that were very different from what I was exposed to previously because it is a deaf population. So there was aural rehabilitation and auditory training that I needed to learn. Here, you are given a mentor for a year ...I had someone by my side if I had questions about aural rehabilitation.

An administrator at a 4201 school spoke of the opportunities her school offers to incoming therapists who may have limited experience working with deaf children in order to prepare them for the demands of working with this population:

We have a mentorship, so when a new therapist starts working here, we pair her up with a mentor and they have to build in weekly meetings to learn about school procedure but also about helping to acclimate to their caseload. How to do those things that they might not have had to do working with the hearing population. And then, in terms of the sign language instruction, we provide an ASL mentor once a week, so they work with, sometimes twice a week depending on where they are, so sometime during the school day, we hire a person, a deaf person, to come in and work with that person one-to-one on sign language.

Another therapist at a 4201 school shared that the majority of her clinical experience had been with individuals with typical hearing, but that the supports
available at her school enabled her to adapt to the hearing impaired population quickly:

I started out at an organization called the Association for the Help of Retarded Children, but I worked mainly with adults...I was there for three years, and then I went to another organization, I was one of the preschool providers, and I really did everything there – some kids had artic issues, some kids had auditory processing issues, some kids were at risk for speech and language delay. So I had a wonderful foundation... One thing when I came on board here at [the school for the deaf] that was a really big help was, we have an actual certified auditory-verbal therapist, and she’s our consultant. So when I first came to [this school], my supervisor wanted me to jump in right away and get educated in the whole auditory-verbal therapy mix – techniques, strategies. So I had to go to conferences given by our consultant. And I found that enormously helpful.

A therapist in a local school district discussed how, although her background in sign language prepared her to work with deaf children, she needed additional professional development once she began working with the deaf population:

I did early intervention for a couple of years, and then I came here [program for deaf and hard of hearing]. I was able to sign, I had some sign training and that was all they were really looking for [when hiring], because a lot of therapists don’t know how to sign at all. It was a drastic learning curve. I had to change my whole thought process of how to help children...I had to try to learn how to sign while I was trying to explain something. It’s not just “OK, let’s do this...” I had to think about how to present it in a certain way so that they could understand. They’re very visual, and most of my other students were not as visual. Also, learning to use an FM system, the differences between one CI and another, if they were MAPped correctly, if they were receiving input from their hearing aids, how to tell if the hearing aids weren’t working...to feel really comfortable with that, where I wasn’t really nervous about it, probably took a year. You know, to feel like I could just come in and I just knew what I was doing.

While all therapists acknowledged that working with deaf children requires a specialized skill set, most felt that their graduate training alone was not sufficient for gaining that skill set. A therapist at a 4201 school discussed that her graduate training did not sufficiently prepare her for working with this population:
I think when you come from a regular [speech pathology] program, which I did, and thank goodness I had a wonderful mentor who taught me these tricks, but you know, it’s very hard because if you want someone who's certified and licensed, they typically come from a regular program, not trained in deaf education. So they have to learn these [techniques] from somebody.

Another therapist at a 4201 school had the following perception of his graduate and clinical training:

I just think there should be a little bit more [preparation for this population] because you will eventually encounter students that have some hearing loss, and you’re gonna have to have some knowledge of that. So I guess if you’re gonna work in a residential school or a school for the deaf, you’re gonna need knowledge of deafness, of deaf culture, of cochlear implants...you know a lot of our SLPs are struggling with that because they’ve never worked with students who had CIs, auditory rehabilitation, all of that is a part of this job.

A therapist in a local school district shared that while her graduate program in speech language pathology did provide an aural rehabilitation class, it did not prepare her for the population of students with hearing loss with which she works:

I know, like, typical language development and intervention, but with hearing impairment there's just not as much written down about how to work with them unless you go into the deaf education field. And you don’t learn much about deaf education in school, especially in speech pathology. We had a class in aural rehabilitation, but it wasn’t the same. It was more for working with deaf adults. There wasn’t much on “let’s work with kids that are this deaf.” It was like, “let’s work with kids that have hearing aids and will be in regular education...and adults with hearing loss.”

Another therapist in a local school district had this perspective on the preparation of SLPs to work with deaf children:

Unfortunately, most speech pathologists have very limited experience with kids with hearing impairment...because I don’t think there are training programs out there that give you an orientation...you get people who are hired and have to learn on the job. But I don’t think there are training programs out there.
Several administrators also expressed their opinions of the lack of preparation in graduate programs for speech therapists to work with deaf children.

An administrator in a BOCES program said the following:

*My therapists here – they learned out of necessity – I’m not sure of their training prior to being here but they’ve been with this program for many years and have learned out of necessity. For speech pathologists coming in and not knowing the dynamic of cochlear implants, of deafness, of the communication needs, I think it’s a challenge. I don’t see many people coming in entry-level well-prepared for this population. I believe that all therapists would be better-prepared if there were more focus on this in college or graduate school.*

All therapists spoke of the need to continue learning that is inherent in working with this population, both due to rapid changes in legislation, technology and methodology that has impacted aural rehabilitation and due to the unique nature of this profession and population. One therapist who had been at a school for the deaf for thirty-three years, discussed the changes in methodology, technology, and the student population she had witness throughout her career:

*I think keeping up with the technology, speaking with our audiologist which I do often…Before, the [cochlear implant] surgeries were different – they were only doing one ear. Now, they’re doing [cochlear implants] bilaterally, for our children who are not implanted there are digital hearing aids. So I think it’s really important to keep up with the recent technology. Definitely take a webinar, go out, go to the other schools for the deaf – have that knowledge of what other people are doing so we are all working similarly so there is a continuum for these children.*

One therapist at a school for the deaf discussed how her program had made dramatic changes in its methodology in order to meet the evolving needs of its children and families:

*The history of our school at one point had been very “ASL.” We now have wonderful, wonderful inclusion classes with two hearing models. It’s called Reverse Inclusion. Those are our auditory oral classes, our preschool classes. So that really helped the whole culture of changing things over to the*
auditory path for CIs and getting kids ready to be auditory oral learners and go into kindergarten.

Therefore, while this study does help to elucidate a variety of skills that therapists possess and utilize day-to-day, both with children typical and atypical of the “4201 schools”, the overall findings of this study gave rise to a new, unanticipated realization – that the skill set in question is contextual, and the skills with which any given therapist approaches his or her clinical practice is determined not only by academic and clinical preparation, but by the context within which he or she has developed these skills and gained clinical experience.

Through the collection, analysis and reporting of data, the researcher discovered that this study was, in fact, a study of context, not skills. While the skill set that was uncovered is informative and instructive, the more poignant revelation is that professionals working with children with hearing loss can, with a great deal of resources, eventually obtain whatever skill set is necessary in a given context. For this reason, the skill set reported by an LSD therapist in a well-funded suburban elementary school who worked with one cochlear-implanted spoken language user was completely different (yet no less relevant) than the skill set reported by an LSD therapist in a large, possibly under-funded urban district who worked with mostly profoundly deaf middle-schoolers in a self-contained class who were dependent on sign language. Likewise, a therapist in a 4201 school who worked with many toddlers and preschoolers whose parents hoped for them to be mainstreamed for kindergarten reported a skill set different from that of a 4201 therapist who worked solely with middle- and high-school sign language users. If the context, namely the school setting, for any one of these therapists were to change,
their skill set would naturally need to evolve to meet the needs of a new educational setting and all that comes with it: communication philosophy, socio-economic status of the families, ages of students, value placed on spoken vs. signed communication, et cetera.

This discovery has implications for the future of the “4201 schools” and their students, most of which will be discussed in Chapter V. However, these implications are rooted in the reality that skill sets develop organically, through direct experience with a specialized population and professional development opportunities that complement one’s clinical practice. Therapists do not hone new skills overnight, and often it takes years to acquire such a skill set as the one delineated in this chapter. Neither this skill set nor the years of experience and learning that shaped it should be taken for granted. Changing the context in which 4201 students receive their services cannot be undertaken cavalierly, and decision-makers at the state level must understand that to change the educational setting of 4201 students would necessitate a change in the skill set of every practitioner who may suddenly find a former-4201 student on his or her caseload.

**Summary, Discussion, Recommendations, Thoughts for Future Study and Limitations**
“They're completely different than any other population that I've worked with.”

The researcher’s journey to programs for profoundly deaf children throughout New York State allowed her to meet and interview speech-language pathologists and administrators, many of whom have devoted their careers to serving children in this low-incidence disability group. It was through these interviews and the ensuing data analysis that the researcher was able to develop a picture of each therapist’s capacity to serve a diverse population of profoundly deaf children, such as those currently served by New York State’s “4201” schools for the deaf, as well as potential consequences and trade-offs involved in closing state-funded schools for the deaf. Owing largely to the honesty and transparency with which participants approached these interviews, the researcher was able to answer both empirical and policy-oriented research questions, draw various conclusions, and generate practical recommendations for New York State policy-makers that, if implemented, could increase economic efficiency while maintaining or improving the quality of services available to profoundly deaf children.

**Section 1: Summary of Empirical Findings**

The study was undertaken for several reasons. First, as covered in Chapter IV, it sought to uncover the skill set that is possessed by speech-language pathologists who work with profoundly deaf children who are typical of those students in New York State’s “4201 schools.” Second, it aimed to clarify which therapists, in which educational settings, have the skills necessary to serve this population. A third intention of this study was to draw attention to the possible consequences and education policy implications of closing the “4201 schools”, thereby dispersing their students throughout the local school districts of New York State.
As detailed in Chapter IV, therapists outlined numerous skills they bring to their clinical practice that are specific to work with profoundly deaf children. Copious data in the form of verbal text in Chapter IV through SLP case study responses and by supervisors of SLPs and administrators of various types of programs for profoundly deaf children support the notion of this skill set, as well as claims by several therapists that these skills can only be obtained through years of experience with profoundly deaf children. However, in attempting to explicitly detail a specific skill set that all therapists working with profoundly deaf children typical of the “4201 schools” have, the researcher came to realize that this skill set is, in fact, murky and contextually-bound. While some of the skills therapists listed overlapped, no skill sets of any two therapists were identical. This could be due to the different experiences therapists have had with deaf children, age groups of deaf children on which they concentrate, or the differences in characteristics between deaf students in mainstream settings (both urban and suburban), BOCES programs and schools for the deaf. Considering the heterogeneity with which the deaf student population presents itself across the educational spectrum, it follows that the skill sets of individual therapists would derive naturally from both the depth and the breadth of experiences they have had with specific types of students in specific types of settings. This will be further discussed later in this chapter.

Section 2: Summary of Policy-Oriented Findings

Consequences. One goal of this study was to expose potential consequences for profoundly deaf children who would receive speech and language services from clinicians who do not possess the necessary skill set to meet their needs. Following analysis of interviews, the researcher deduced that there would be several consequences,
both anticipated and unanticipated, to eliminating funding to the “4201 schools.”

Anticipated consequences stem directly from the data collected: that many 4201 students would experience reduced quality of services and increased isolation should the schools close. In addition, data analysis revealed that local school districts would most likely not be prepared to absorb the 4201 students. Those that can provide education through total communication in a self-contained classroom setting would need time to adapt to the increase in students. This might lead to further isolation by segregating deaf students from the general education classrooms. Those districts that do not have the critical mass for a self-contained classroom option likely lack the structure necessary to absorb these students at all. BOCES programs could assist in gathering a critical mass of deaf students, however BOCES is not available in the state’s largest school districts and not all existing BOCES programs have self-contained classrooms for the deaf. Unanticipated consequences relate to the potential for increased fiscal costs to school districts, which would struggle to fulfill the students’ mandates on their IEPs or risk opening themselves up to litigation for failing to address the anticipated consequences.

**Reduction in quality of services.** Much attention was paid in Chapter IV to the study’s “outlier,” a highly qualified and experienced speech-language pathologist in a local school setting who had not encountered a profoundly deaf child until after her thirtieth year in the field. She took the researcher through her journey to obtain the necessary information and skills in order to serve the one profoundly deaf child on her caseload, who is a successful user of spoken English and benefits from bilateral cochlear implants. While this therapist reported great success working with this child and his family, she noted the enormous amount of continuing education she had to pursue in
order to adequately meet his needs. She spoke of countless hours spent on the phone with technological representatives from the manufacturing companies of his cochlear implant and FM system, and shared that it took her a full year to feel comfortable troubleshooting his listening devices. In addition, she described certain skills, such as those needed for auditory training, that she had not obtained in her education or clinical experiences, and cited numerous professional conferences that helped her obtain proficiency in methods of aural habilitation. Despite all of this additional training and the effort she has put into learning about deafness over the two years she has worked with this child, when presented with a case study describing a profoundly deaf child typical of the “4201 schools”, she stated without hesitation that this kind of case was outside her “comfort zone” and in fact that she was at a “disadvantage” responding to the case study “because I don’t work in a school for the deaf.” Even more poignant was her response when asked if there would be a place in her district for this child. After considering all of the options available to children with disabilities in her school district, from the most- to the least-restrictive environment, she stated that there would be no option for him and the district would be “sending a referral out” for his placement elsewhere. This suggests that she believes that there is no entry point for most of the 4201 students in her school district’s current structure. We can assume this would be the case in most local school districts throughout the state.

**Increased isolation.** Another therapist working in a local school district setting described the isolation that her students experience as the only self-contained class for deaf students in their entire school. Due to these students’ limited spoken language abilities, they all rely on sign language to communicate; the rest of the school’s student
body does not sign. Therefore, according to this therapist, the small number of students in this self-contained class interact only among themselves. They have no additional deaf friends in school and no deaf role models. According to IDEA (2004), students with disabilities should receive an education and opportunities for socialization alongside typically developing peers to the greatest extent possible, yet these students do not receive either. Their placement in a specialized class for the deaf and separation from their typically developing peers further isolates them, and without a critical mass of other deaf students with whom to interact, they are divorced from life outside of the walls of their classroom.

The examples above allow the reader to envision the very real consequences that could befall our state’s profoundly deaf children, should the “4201 schools” close: reduced quality and increased isolation. There are most likely hundreds of other speech-language therapists throughout New York State who would match the description of this study’s outlier – well credentialed but lacking in the requisite experience to provide the high-quality services to which deaf students are legally and ethically entitled. Careful consideration must be paid to the likelihood that in schools and districts throughout New York State, particularly in rural areas with fewer resources than more densely populated urban and suburban areas, most speech therapists will have limited experience with profoundly deaf children whose primary mode of communication is sign language and who do not fit the description of the typical “high-functioning” deaf child who has benefited from early amplification and early intervention services. As described by Nevins and Chute (2009), while children with cochlear implants (as well as hearing aids, which the authors do not discuss) who present only with a severe-to-profound hearing
loss are able to perform on par academically with their typically hearing peers, deaf children with additional challenges do not always reap the same benefits from their listening technology. “Additional challenges” can include multiple disabilities and the effects of poverty, which will be discussed later in this chapter. These children may present with additional needs and may necessitate a more comprehensive approach to communication therapy that may require knowledge of sign language, cued speech, tactile sign language, visual phonics, or numerous other modes of communication and remediation strategies. It would be naïve for policy makers to assume that this expertise could be found in any given school district. Additional research should be conducted with this population of speech-language pathologists to get a true understanding of their preparedness for work with profoundly deaf children.

Another set of stakeholders that could experience increased isolation is the therapists working in local school districts. As reported in detail in chapter IV, therapists in “4201 schools” have a built-in system of support and often are provided with mentorship and knowledgeable supervisors. Many reported that this support network was critical for their work, considering the diversity of their caseloads and severity of disabilities with which their students typically present. However, for therapists in local school districts, no support system with the knowledge and expertise in deafness exists. The “outlier” discussed in chapter IV had few tangible resources and no mentor on-site to guide her. Hers was a journey of educating herself. Should “4201 schools” close, many more speech-language pathologists could very well be in similar circumstances. Even if the local school districts were fortunate enough to hire an individual with experience, skill and knowledge in working with children who are deaf, unless there is sufficient need
to hire more than one such individual, he or she would still be rather isolated in that the individual would not have colleagues with similar backgrounds with whom to consult. Therefore, therapists in individual schools and districts would likely experience isolation as well, and would be left to learn all there is to know about assistive technology, sign language, aural habilitation techniques, and whatever else is required on their own.

**Trade-Offs.** The final goal of this study was to explore the trade-offs that would be involved in a decision to eliminate funding to the “4201 schools”. In Chapter I, the researcher discussed the often-unavoidable dilemma faced in education: whether to prioritize the values of service quality, equity, or fiscal efficiency. If policy makers are not judicious in their decision-making, it is possible that they could compromise all three values.

**Fiscal compromises and issues of compliance.** State-level policy makers seek to reduce spending by eliminating funding for “4201 schools”; however, there could be untold additional costs to both the state and local school districts that have yet to be examined. Reduced costs at the state level would likely result in increased costs at the district level, as local educational authorities would either attempt to support their students’ expensive attendance at schools for the deaf or decide to absorb them into local schools, which would require a host of additional services and possibly additional faculty, therapists and paraprofessionals. Failure to uphold the promise of a free and appropriate education through the provision of high-quality services and compliance with the mandates on students’ IEPs could lead to lawsuits. If New York State is found to be out of compliance with IDEA, its federal IDEA funds could be withheld.
Since President Gerald Ford signed it into law in 1975, the Individuals with Disabilities Education Act (IDEA) has given millions of children with disabilities access to the same education as their typically developing peers. The concept of a “free and appropriate public education” for all students with disabilities is paramount to their inclusion in the regular education environment, and while prior to IDEA these students were typically isolated in specialized schools or institutions (or did not attend school at all) they are now able to participate in general education classes with access to a continuum of support services (Sack, 2000). The successes of IDEA cannot be understated, and for the majority of students in this country who are capable of functioning in the regular education environment with support, the general education classroom truly is the most appropriate and least restrictive environment. However, the capacity for local school districts to provide the degree of services and accommodations necessary for many of the children in “4201 schools”, including, of course, specialized speech and language therapy conducted in their primary mode of communication, may be limited in some geographic regions of New York State. The merits of an inclusive, regular education environment versus a segregated, special education environment for 4201 students could be debated to no end, and numerous administrators and therapists interviewed for this study gave compelling arguments for both points. What New York State’s policy makers should concern themselves with is the issue of compliance. IDEA clearly states that schools must provide related services to students with disabilities that are appropriate for their unique needs (IDEA, 2004). For reasons stated throughout this study, high-quality service provision to students typical of the “4201 schools” may be difficult or impossible; at least one interview from this study’s “outlier” demonstrated the
degree to which most speech-language pathologists would be unqualified to work with these students. In *Cedar Rapids v. Garret, F.* (1999), the Supreme Court found that schools in participating states are required to provide related services consistent with the individual needs of a child with a disability who is covered under IDEA. While that case related to nursing care, it is easy to draw the connection between the defendant’s need for specialized nursing care and the 4201 students’ need for specialized speech-language therapy and other related services. If children from “4201 schools” should be forced to attend their local public schools, many of which would be unprepared to or incapable of providing appropriate services, these districts would find themselves out of compliance with federal special education law and subject to litigation.

**Reduced educational equity.** Another trade-off for closing the “4201 schools” would be a reduction in educational equity for the state’s most traditionally underserved and vulnerable students. Data analysis revealed an interaction between the education and spoken language achievements typical of each therapist’s caseload and the socio-economic status of students in those settings. Therapists working in “4201 schools” or local school districts in large, urban communities reported a more diverse and lower-achieving caseload than did their counterparts in suburban areas. As discussed in Chapter I, students in “4201 schools” are already among our state’s most impoverished and disadvantaged. Closure of “4201 schools” could risk further oppressing these children and their families, who depend on the visual communication, supplementary and related services, and expertise the schools offer.

There is no escaping the link between levels of poverty and academic performance. Dating back to the Coleman Report in the 1960’s, and more recently
demonstrated by data from the National Assessment of Education Progress, research has shown that children from impoverished backgrounds show lower degrees of educational attainment than their middle class or wealthier peers (Ladd and Fiske, 2011). Poverty rates are also linked to limited access to healthcare. In their article “Improving Outcomes for Children in Poverty,” (2011) Voss and Lenihan note that poverty can impact access to audiological and educational services. Limited access to healthcare can result in a delayed diagnosis of hearing loss, which will have dire effects on a child’s language development and educational success. Park, Turnbull and Turnbull (2002) write that even for families who have Medicaid, obtaining adequate health care is challenging because many doctors do not accept Medicaid patients, and the numerous incidentals of health care, such as co-payments, can be difficult for poor families to afford. Suskind and Gehlert (2009) mention that deaf children living in poverty are less likely to be mainstreamed into the general education environment, more likely to be misdiagnosed with a learning disability, and are more likely to drop out of school than their wealthier counterparts. The increased probability of a misdiagnosis is likely connected to the significantly higher percentage of children from low SES whose parents and teachers remain ignorant of their hearing loss due to lack of follow-up on newborn hearing screening referrals (Suskind and Gehlert, 2009).

This interaction between poverty and deafness is especially troubling when one considers that the three large urban areas in New York State that have “4201 schools” (Buffalo, Rochester and New York City), representing five “4201 schools”, have poverty rates higher than the state average. According to the U.S. Census Bureau, between 2006 and 2010 (prior to the current recession), New York State had a poverty rate of 14.2
percent. This is roughly half the poverty rate of Rochester (36.3%), Buffalo (31%) and New York City, where thirty percent of children live in poverty. The New York City borough of The Bronx continues to be the poorest urban county in the United States (Roberts, 2011); it also happens to house one of the “4201 schools”. The involvement of poverty could also explain why therapists working in large, urban school districts with high poverty rates described caseloads of students more similar to those in “4201 schools” than did therapists in wealthier suburban programs. If New York State policy makers proceed to end funding to “4201 schools” in order to help solve the state’s budget dilemma, they must ensure that the education and service provision to its most vulnerable students is not jeopardized. They should also establish safeguards to ensure increased access to health care and information and negate the detrimental effects of poverty on students with disabilities and their families across the state. Should policy-makers ignore the harsh realities related to the interaction between poverty and deafness, they would do so at the peril of children, families, and education professionals throughout the state.

Therefore, the trade-offs involved in eliminating 4201 funding span the spectrum of educational values. They include sacrificing the quality of services by placing students in the care of inexperienced therapists and unprepared school settings; sacrificing educational equity by disproportionately impacting disabled students from impoverished backgrounds; and potentially risking unforeseen costs by imperiling IDEA funding, increasing the budgetary demands of small local school districts, and opening the state up to litigation if it is found to be out of compliance with IDEA. Undoubtedly, numerous additional trade-offs would surface, but this researcher cannot possibly predict what they would be. For this reason, it is critical that all stakeholders in services for deaf children
be brought together with policy makers in order to discuss these trade-offs and to ensure that quality, equity, and efficiency are protected to the greatest extent possible. Now is not the time for New York State to make decisions from afar and place them, without warning, on the shoulders of local school districts, teachers, and our state’s most vulnerable children. All stakeholders must come to the table in order to proceed smartly and cautiously.

**Reduced quality of services with potentially long-term consequences.** It has already been discussed in this chapter that a failure to provide profoundly deaf children typical of the “4201 schools” (those who use sign language, may have additional disabilities and of whom many, if not most, are impacted by poverty) with speech and language services from highly-qualified professionals could have drastic consequences for their ability to make progress. However, another trade-off of cutting funding to “4201 schools” would be the termination of the skilled early intervention and preschool services these institutions provide to young deaf children and their families. Positive outcomes through early intervention and preschool often results in successful mainstreaming, which enables children to attend their local schools, participate in a rigorous curriculum, and develop spoken language abilities commensurate with their typically-hearing peers.

Suskind and Gehlert (2009) write that the quality of early intervention and preschool programs to which a deaf child with a cochlear implant has access will greatly impact his success at developing spoken language and mainstreaming successfully. The same could most likely be said for deaf children with hearing aids. For those children who do not use cochlear implants nor benefit from hearing aids in any significant way, early intervention with experienced professionals allows for the acquisition of language
by means of a sign language system or American Sign Language during the critical period of language acquisition. An investment in early childhood speech and language therapy through early intervention and preschool programs should be seen as an investment that will yield great dividends when these children are able to successfully attend their local schools, which come at a lower cost than specialized schools for the deaf or BOCES programs. A study published by Cheng et al. (2000) revealed that, despite the costs of medical management of children with cochlear implants, the reduction in educational expenditures due to increased mainstreaming rates totaled a per-child savings a $53,198 (Lin, Niparko and Francis, 2009.) However, it must be noted that these savings do not occur magically, and deaf children with cochlear implants must undergo specialized aural habilitation therapy in order to obtain the necessary level of benefit from their technology for mainstreaming. This is no doubt one of the reasons that Russ, Hanna, DesGeorges and Forsman (2010) emphasize that infants who do not pass their newborn hearing screenings should, by six months of age, be enrolled in early intervention programs “for children who are deaf or hard of hearing.” Stated differently, if the goal is for deaf children to develop listening and spoken language, simply any ordinary early intervention program will not do.

In Nassau and Suffolk counties, both on Long Island, two “4201 schools” are seeing tremendous success rates with their auditory-oral preschool programs. Both schools (Mill Neck Manor School for the Deaf and Cleary School for the Deaf) report successful mainstreaming rates of above 90% for children who have gone through their early childhood auditory-oral programs (personal communication, Fran Bogdanoff and Kenneth Morseon, October 2012). It is the expertise that these schools’ therapists,
teachers and administrators bring to this program that enables them to succeed in working with young deaf children and their families and see that these children are rapidly mainstreamed into the general education environment.

Section 2: Discussion

The “4201 schools” play an important role in the education of deaf children in New York State. It is true that alternative placements for deaf children exist throughout the state. However, no other educational setting the researcher visited presented with the ability to provide the vast array of services and types of communication modes to a student body as diverse as that of the “4201 schools.” Data showed that many of the “4201 schools” have evolved to meet the new and emerging needs of its student body. In addition, as reported by many “4201” therapists, increasing numbers of deaf students with comorbidities have begun attending these schools. The professionals within these schools, through continuing education (often provided by the schools) and direct, consistent experience with profoundly deaf students and their changing characteristics, have been able to expand their skill sets to meet these new needs.

Due to the low incidence of deafness, and especially deaf children with additional disabilities, in the public schools, the majority of SLPs in the local school districts likely do not possess this same skill set. As evidenced by the study’s “outlier,” a clinician in a public school, developing the skill set to provide services to a profoundly deaf child who uses spoken language and is otherwise typically developing involves extensive resources, continuing education, and time. One can only imagine how much additional preparation would be required to work with deaf children who require visual communication and the
modifications already offered by clinicians in the “4201 schools.” The students of the
“4201 schools” have immediate needs and cannot afford to wait months or even years for
high-quality therapy while their clinicians prepare themselves. However, several
administrators in the “4201 schools have already reported feeling the effects of the
redirection of funding from the state, and shared that it is becoming increasingly difficult
for them to receive approval from local districts to retain or admit certain students to their
schools. The “4201 schools” do play a critical role in the lives of deaf children and their
families in New York State. Changing the structure of the current deaf education system
and removing the “4201 schools” as an option for those students who need them, will
introduce perturbation into New York State’s education system. Serious consequences
will emerge as a result of this disorder, not only for the stakeholders within the “4201”
community but for stakeholders in local school districts and BOCES programs.

The elusive skill set. While the majority of therapists interviewed for this study
reported possessing this skill set, there was at least one therapist in each group (4201,
BOCES and local school district) that felt either inexperienced or under-qualified to
provide high-quality services to profoundly deaf students. Analysis of interview
transcripts revealed that this self-perception had no connection to the quality of academic
training therapists had received or their number of years of clinical experience; all
therapists were credentialed with state licensure and a Master’s degree in either deaf
education or speech-language pathology, and therapists with five years of experience
were just as likely as those with thirty years of experience to feel poorly prepared to work
with the population at hand. Rather, this self-perception was related only to their amount
of exposure to and experience with profoundly deaf children, both in their academic and
clinical experiences, suggesting that, as with many specializations, one can only truly prepare for work with profoundly deaf children through direct experience. Therefore, the researcher concluded that the skill sets of SLPs working with profoundly deaf children in “4201 schools”, as well as the existence of these skills among therapists working in alternative placements for deaf children, is murky, or more precisely, contextually-bound. While there may be an “ideal” skill set for working with this population, whether or not a therapist possesses it is determined by numerous factors, including the length of time they’ve worked with deaf children, in what type of educational setting they have gained experience, and various characteristics of the students with whom they have worked.

While this may seem an obvious conclusion, it is problematic due to the fact that deafness is a low-incidence disability, and few clinicians in local school districts will encounter more than a handful of deaf children throughout their careers. Graduate training programs typically offer no more than one course in aural rehabilitation, often geared toward work with the geriatric, not pediatric, population. Historically, this has not been a concern because profoundly deaf children were typically in center-based schools for the deaf, where therapists had years of experience and had pursued much of their professional development in the field of deafness. With increases in mainstreaming, therapists in local school districts now may encounter more deaf children than in the past, but due to technological advances and successful outcomes from early intervention, most of these are high-functioning spoken language users, and thus can be successfully treated by therapists who have a standard educational and clinical background. As has already been discussed, most of the children in the “4201 schools” do not fit this description for various reasons: many were late-identified and fitted with amplification outside of the
recommended zero-to-three age range (a critical period of language development); a large percentage are from families living under or near the poverty line, or that do not speak English well, and thus may have had limited access to audiological care or be ill-informed of the array of services, such as early intervention, to which they are entitled; an increasing number of students in these schools have additional disabilities, such as autism or visual impairments, that interact with deafness in such a way that renders traditional methods of therapy insufficient. It is these children with whom this study is concerned, and these children that New York State politicians must consider when making any changes to the 4201 funding system.

While therapists without a strong clinical background or extensive experience with deaf children in BOCES and local school district settings reported that they had limited opportunities to attain this experience and had to seek professional development opportunities outside of their workplace to gain new clinical skills to supplement their previous training, therapists in 4201 and their supervisors spoke of the myriad ways in which their learning and continued professional development is supported in their schools. These opportunities, which were detailed by therapists and administrators alike in “4201 schools”, included: a) Mentoring relationships between new and seasoned colleagues; b) continuing education opportunities brought into the schools, such as training through a deaf-blind collaborative and literacy programs targeting deaf students; c) free American Sign Language classes that are open to all faculty, parents, and members of the community; and d) the team work afforded by such an extensive network of faculty all skilled in deafness. These provisions allow the “4201 schools”, when necessary, to hire therapists less-experienced with deaf children while ensuring that they
gain experience and knowledge expeditiously, thereby hastening their “learning curve.” Therefore, while some therapists in non-4201 settings felt moderately prepared for this population, they had fewer resources upon which to draw and fewer colleagues from whom to seek advice and support in order to gain the knowledge and skills necessary for working with profoundly deaf children. In other words, like the students with whom they work, these professionals too may become isolated as well.

**Discrepancies regarding “best” placement for 4201 children.** Equally interesting was the occasional presence of discrepancies in perceptions participants held regarding their own programs as well as alternatives to their programs, especially among administrators. For example, in one large, urban school district, both a therapist and administrator were interviewed (separately.) While the therapist remained adamant throughout his interview that schools for the deaf do have a critical role in serving the profoundly deaf children in his geographic area and that his district would likely be unable to accommodate an influx of students from the local 4201 school, his supervisor argued that she could indeed make the modifications to absorb students from the school for the deaf. This discrepancy could possibly derive from a lack of awareness at administrative levels of the realities of working with children typical of the “4201 schools”; therapists with hands-on experience with these children would be more knowledgeable of the increased frequency of services and specialized skills they require of their therapists.

Another discrepancy existed between several 4201 administrators, who unanimously viewed their programs as the most appropriate types of placements for most 4201 students, and administrators of local school districts and BOCES programs. Many
4201 administrators seemed to view the alternative placement options with suspicion, and shared stories of biased assessments and inappropriate goals being written by professionals in these settings. In addition, several 4201 administrators reported feeling uneasy about their students entering the mainstream, citing past experiences with students mainstreaming unsuccessfully, sometimes without being given qualified sign language interpreters, and with district personnel unfamiliar with the technological needs of students using hearing aids, FM systems or cochlear implants. Numerous quotes from administrators in this area, which appear in Chapter IV, indicate a lack of trust with the available alternatives to “4201 schools”.

Conversely, administrators in the BOCES and LSD groups viewed the placement of many students in “4201 schools” with caution. One BOCES administrator expressed feeling that parents’ primary reason for placing their children in the area’s local 4201 school is for socialization, thereby dismissing the additional support and expertise available to students and families in schools with such a large critical mass. Another administrator, this one from a local school district, questioned the local 4201 school’s academic rigor, stating that it was focused more on vocational training and functional communication. However, this discounts the possibility that, due to various reasons discussed previously in this paper, vocational training and functional communication might be appropriate for most of the school’s students. Furthermore, the assumption that schools for the deaf lack the ability to provide a rigorous curriculum and prepare children for the mainstream, while oft-repeated, is not true in all cases. Indeed, therapists and administrators in at least two “4201 schools” interviewed for this study reported high mainstreaming rates for children in their preschool programs. These schools, which
historically have been grounded in a total communication philosophy and have been perceived as hubs of deaf culture, made drastic changes to their programming and philosophy in order to provide a spoken language education for its youngest students.

One other administrator in a large, urban school district proposed the possibility that the primary disability of many multiply-disabled students in her area’s “4201 schools” may not even be deafness, and that self-contained classrooms in her district for children with autism and other disabilities might in fact be more appropriate for them than a school or self-contained classroom for the deaf.

Many of these statements are likely opinion-based, and it would be impossible for the researcher to draw conclusions at this time regarding the merits of one educational setting over another for all of the state’s 4201 school students. However, they lend support to the notion that all stakeholders involved with deaf children throughout New York State should be brought to the table when making drastic decisions about the future of “4201 schools” and, essentially, the future of services for profoundly deaf children throughout the state.

A lack of viable alternatives in some parts of the state. While the large, urban school districts within New York City may offer numerous educational options for profoundly deaf children, this is not the case in most parts of the state. In some geographic areas, such as Western New York and Suffolk County, Long Island, there are no viable alternatives to “4201 schools” for educational and early intervention programming. As reported in Chapter IV, an administrator in a large, urban school district in noted that in the past, her district had offered self-contained classes, and that although she felt it within her district’s capacity to offer deaf students a full continuum of
services, that it would likely take time and additional resources to bring that to fruition. It also must be noted that this district’s school for the deaf services students from dozens of surrounding rural counties, indicating that the school’s students who are dispersed throughout its region would be left with limited options for educational placement. This should be carefully considered in future planning for students of “4201 schools” in these areas.

Section 3: Policy Recommendations

Should the funding for “4201 schools” and New York State’s existing structure for deaf education continue to be imperiled, it is critical that policy-makers engage in careful and thoughtful planning for the future of the state’s deaf children. The following recommendations are based on the experiences of the investigator as she traveled the state meeting with and interviewing the immediate stakeholders in the state’s decision regarding the “4201 schools”, as well as steps that have been taken by other states facing similar fiscal issues and decisions. These recommendations are also based on the investigator’s own personal and professional experience with schools for the deaf, local school districts, and children with profound hearing loss.

Bring all stakeholders to the table. Superficial analysis of interviews might lead one to erroneously believe that only those children and professionals at “4201 schools” would be affected by a decision to eviscerate the funding for these schools; on the contrary, its impact would be felt by therapists and administrators across the state, in school districts urban, suburban and rural, and would almost immediately trickle down to the quality of care available to profoundly deaf children in every educational environment. Simple arithmetic spells out the need to eliminate some spending at the
state level in order to balance our state’s budget, and some of these cuts will inevitably be made to educational programs. Champions of the “4201 schools” have already asserted that the state, in threatening to eliminate funding for “4201 schools”, has focused on the wrong funding recipient. It is not the intention of this investigator to reiterate or refute those claims. Rather, this investigator would implore New York State to resist the urge to undertake a reduction or elimination of funds for these schools without regard for the consequences. Careful planning must accompany any adjustment in funding to the “4201 schools”, or the consequences not only for 4201 children, but for the state as well (which could find itself out of compliance with IDEA), could be severe.

Therefore, it is recommended that if proceeding to cut funding to “4201 schools”, New York State involve all stakeholders in the planning for these children’s futures. Representatives from all “4201 schools”, local school districts and BOCES programs must come together to plan and implement a “new era” of education and service provision for profoundly deaf children in New York State. Due to the critical link between academic preparation and clinical readiness, it may also prove beneficial to involve graduate training programs in speech-language pathology throughout New York State, so that they may become more aware of this growing need and plan their training programs accordingly. Representatives from the State Education Department should be involved and might consider increasing the standards for state certification and licensure for speech-language therapists as they relate to aural habilitation and work with profoundly deaf students. Considering the findings in Chapter IV, it is recommended that these standards include not only academic preparation, but actual graduate-level clinical experience, with students with profound hearing loss. If this is not possible, then perhaps
the State Education Department would consider requiring training in aural habilitation as part of the mandatory continuing education units all speech therapists are required to obtain for maintenance of their certification and licensure. Representatives from the Department of Health that oversee Early Intervention and the Early Hearing Detection and Intervention Program should also be involved, due to the connection between early hearing loss detection/early intervention and deaf students’ preparedness for pre-school and grade school.

When conducting the information-gathering phase of the consolidation process, Virginia’s task force conducted focus groups, established a public comment period at task force meetings, and created a public comment mailbox on its Department of Education website (VSDBCTF, 2003). Focus groups involved parents, school personnel, school alumni, public school special education administrators. North Carolina’s committee allowed for numerous opportunities for public and school personnel input, including direct meetings with the core committee, submitting statements in writing and filling out a survey online (NCDPI, 2011.) These states could both serve as a model for New York to involve multiple stakeholders who would be impacted by 4201 school closures.

**Curtail the “turf wars.”** One prevailing theme throughout interviews with administrators was each one’s belief that their program could provide the “best” possible learning environment and therapy services to the 4201 students. Local school district administrators made the claim that their setting offered the least restrictive environment, held their students accountable to state standards, and could expand and adjust as much as their district required them to. One district, which has no self-contained classes for the deaf, would only be able to provide general education with support services, which likely
would be insufficient to meet the needs of many of the 4201 students; more likely, they would be placed in self-contained special education classes where they would be exposed to a less rigorous curriculum and potentially take alternate assessments as opposed to state and district-wide assessments, as the lowest-functioning one percent of students in a school are permitted to do. The other district in question does offer an array of self-contained classes, both auditory oral and total communication. While a viable alternative to that area’s “4201 schools” exists hypothetically, it is unlikely that this system would serve profoundly deaf students any better than “4201 schools”, as this district has approximately double the amount of students receiving free breakfast and lunch as the national average and continues to underperform on state-wide standardized tests (CBS News, December 7, 2011). Field notes from both local school districts involved in this study revealed that environmental conditions of therapy rooms were inadequate for working with children with hearing loss; in one setting, the therapy room was shared by several other therapists conducting sessions simultaneously (resulting in competing noise) while in the other, the therapist’s room was an annex of the auditorium. A choir was rehearsing while the interview was conducted – one only needs to imagine how problematic that would have been had our interview been a therapy session instead.

As sure as local school district administrators were that their system could adequately serve the 4201 students, administrators at the schools for the deaf were equally dogmatic in their convictions that without the “4201 schools”, these children would be “lost,” their social lives annihilated, their academic promise jeopardized. Despite the fact that these schools do keep some deaf children away from a less restrictive environment in which they could potentially be successful (assuming they
would have high-quality support services to ensure their progress and had received all the requisite early detection, amplification, and intervention services needed for successful mainstreaming), they also provide an education in sign language, professionals skilled in working with deaf children, and a rich social and cultural environment in which deaf children can develop high self esteem, socialization skills and a rich use of language. These administrators feared for the alternatives awaiting these students, citing numerous experiences they had had with local school district personnel conducting biased assessments, as well as writing inappropriate IEP goals and nonsensical evaluation reports due to their ignorance of the educational implications of hearing loss. The lone administrator participant from BOCES, like the other administrators, insisted that her program could best serve profoundly deaf students because it offers a “best of both worlds” scenario – access to a rigorous curriculum in the general education environment with the support afforded by inclusion classes and teachers and therapists skilled in sign language and deafness. This program, too, had its drawbacks, as according to field notes, it consists of fewer than twenty students across all ages, limiting the number of peers with whom 4201 students would be able to build relationships. The two speech-language pathologists involved in the program would not be able to handle a large influx of deaf students from the nearby 4201 school, although it is likely that should that area’s 4201 school close, the BOCES program would quickly expand. In addition, while the benefits of county-wide, cooperative programs like BOCES cannot be emphasized enough, the BOCES system is not immune to state cuts and has its own history of threats to its funding and vitality (Piccoli, 2012; Capital Region BOCES, 2013).
Therefore, we can conclude that when it comes to educating and serving the students of New York State’s “4201 schools”, no option is perfect. In this era of fiscal austerity and in a system in which state funding is tied to student attendance, administrators of all types of educational programs are fighting for their right to exist and seeking out ways to grow their programs. While this is understandable, it is not helpful and might even lead to greater expenditures, reduced fiscal efficiency, and reduced quality of programs and services. It will take thoughtful planning and consideration from all stakeholders involved (including teachers, parents, therapists, and administrators) from across the entire state to determine what, exactly, high quality programming and services will be for New York State’s deaf students. Ensuring the continued care of 4201 students in a financially pragmatic way will require all stakeholders to come together, compromise, and plan for a system that ensures that all deaf students in New York State receive the quality of services they deserve and to which they are legally entitled in a way that does not drain the state’s resources or put undue financial burden on the local school districts.

Consider the realities of each geographic area. While the contextual nature of the therapists’ skill sets has already been discussed, another interesting finding that emerged from this study was that the services that the schools involved provided were contextual as well. For example, the one school involved in the study that reported having a “Bilingual” philosophy is located in a city with a rich Deaf culture and active Deaf community. This school, partly owing to its historical connection to Deaf culture and American Sign Language, does not offer any formal auditory-oral or spoken language development programs (such as parent-infant or preschool programs.) It does,
however, offer therapy focusing on listening and spoken language on an individual basis, depending on the wishes of a child’s family. On the other end of the spectrum are schools in suburban areas that, due largely to parent demand, have placed a large emphasis on listening and spoken language development, especially for its parent-infant and preschool programs. In the larger urban areas that offer alternatives to the “4201 schools” (such as auditory-oral preschools and center-based aural habilitation), therapy in the schools for the deaf focuses primarily on the development of functional communication skills using sign language as a mediating tool. As previously discussed, the alternative programs in these areas most likely do not have professionals who can meet the communication needs of the 4201 students.

While some geographic areas of New York State may offer alternatives for students at “4201 schools” (although they might not be viable options for the students in question), there are at least two regions that cannot currently provide another option for these students. The “4201 schools” in Western New York serve students from dozens of school districts, many of them rural and with a paucity of services for deaf children. There is currently no comparable educational environment – self-contained classrooms with content taught through sign language, and speech and language clinicians who can sign with their students and offer specialized treatment - in this region. Likewise, one of the suburban communities in the downstate area has no alternative program. Indeed, none has been needed because the two schools for the deaf serving that area provide such a wide spectrum of services (and do so effectively, with the 90% mainstreaming rates reported previously) that a BOCES or local school district program for the deaf would have had low enrollment and been fiscally inefficient. These two schools not only
provide the specialized education and clinical treatment that their signing students need, but provide other seemingly small but critical services: parent-infant programming, full or partial mainstreaming options for middle and high school students, and, perhaps the most efficacious of all, auditory/oral preschool education. Auditory oral preschool education is a gem that gives profoundly deaf children who have access to all speech sounds an education through listening and spoken English. These programs provide profoundly deaf children with the intensive therapy and language exposure that they need in the critical years of development in order to successfully mainstream. The reader should immediately recognize that educational programming that seamlessly moves profoundly deaf children from state-funded schools for the deaf into the mainstream ends up saving the state a considerable amount of money throughout the duration of each child’s education. The flexibility and spectrum of services that these schools are able to provide enable them to serve the entire range of deaf children in this region, from the highest-functioning preschooler to children with severe secondary and tertiary disabilities.

One suburban county does in fact have several options, including a BOCES program for deaf and hard of hearing children (with self-contained classes and professionals who sign), a 4201 school, and numerous high-performing school districts. However, this is the county in which our much-discussed “outlier” works, and for reasons already discussed it is doubtful that her colleagues in other districts would be any more prepared to serve these students than she. School districts throughout New York State employ countless speech-language pathologists and teachers of the deaf, and it is easy to assume that sending 4201 students into their community public schools with support
services would be sufficient for continuing their quality of care and education. The reality is that the “4201 schools” have adapted to the growing needs of these profoundly deaf students while local school districts have been all but unaware of their existence. Some regions, especially large urban ones, may have the capacity to implement a system that could absorb these students; others do not. This should not be discounted.

**Use other states as models.** New York is not the only state grappling with difficult decisions such as the future of funding for specialized schools. States throughout the country are struggling with new budget realities brought on by the current recession, just as specialized schools for students with disabilities are experiencing decreased enrollments. At least two other states (Virginia and North Carolina) have already gone through with consolidations of their state-funded specialized schools, citing a need for both increased efficiency and higher quality of education as reasons.

In order to conduct the necessary research and decision making for school consolidation, Virginia’s education department established a task force and North Carolina has created a core committee. In its Residential Schools Closure Report (November 30, 2011) the North Carolina Department of Public Instruction listed five considerations based on which they would make their decision of how to consolidate schools, specifically referencing “minimization of the impact on services to deaf and blind students currently served by the residential schools.” This should be of equal concern to New York State’s Education Department as, for reasons discussed throughout this study, reduction or elimination of funding to New York State’s “4201 schools” could indeed have an impact on their students’ access to quality and appropriate related services. Both North Carolina and Virginia were committed to using their budget issues
as an opportunity to improve the educational outcomes for the schools’ students, noting that consolidation of the schools would reduce wasteful spending and allow existing funding sources to be maximized for the benefit of the students (Virginia Schools for the Deaf and the Blind Consolidation Task Force [VSDBCTF], 2003; North Carolina Department of Public Instruction [NCDPI], 2011.) Task Force and Committee members involved in the data gathering and decision-making process included a wide variety of representatives at the state and school levels, including state superintendents, representatives from state agencies for special education and disability services, school superintendents and school parents. By involving representatives from multiple levels and perspectives, these committees were able to proceed with a comprehensive evaluation of the current levels of functioning of the schools, needs for improvements and recommendations for a cost-effective and outcomes-based school consolidation.

**Take economically efficient steps to target the problems with deaf education in New York State.** While the high cost of tuition at “4201 schools” for the deaf is justified by the services and small class sizes they offer, there are other state-funded programs that, if used effectively, could lead to savings for the state in the long-run. For example, early hearing detection and intervention programs, which have been underutilized and underperforming, could be maximized in order to increase the number of deaf children throughout the state who can successfully mainstream, which will ultimately save the state money. Increasing support and opportunities for children with disabilities (including those from low-SES) need not spur on a slew of new expensive programming; rather, the state and local communities can utilize organizations and programs that are already in place, such as hospital newborn hearing screenings, to
ensure the earlier identification and follow-up of children with hearing loss. In their article “Improving Follow-up to Newborn Hearing Screening: A Learning Collaborative Experience,” Russ, Hanna, DesGeorges and Forsman (2010) outline various strategies that were developed by teams from several states to improve the coordination between hospitals, families, primary care physicians and early intervention programs. Even simple changes they made to their current systems, such as having newborn hearing screeners collect a second contact name and phone number from families of babies who did not pass screenings and providing families with toll-free numbers to call, helped these states improve follow-up and documentation; they also, interestingly, increased savings of up to fifty hours per month of time doing outreach work. Of course, this assumes that early detection, amplification and intervention could lead to successful spoken language outcomes for all profoundly deaf children, which is not necessarily the case.

Early intervention, a state-wide program that provides children and families with support and services from birth through three years of age, could increase its cooperation with families and related professionals and take a greater role in the educational planning and transition of these children into appropriate preschool programs. Greater cooperation between hospitals and Early Intervention should be achieved in order to create a seamless transition between a newborn hearing screening referral and follow-up through Early Intervention. In addition, given the realities of the limited preparation most speech-language pathologists have in aural habilitation, therapists working through Early Intervention should receive training in this area to prepare them to effectively service deaf infants and their families. In a survey conducted by Nelson, Bradham and Houston (2011) on state early hearing detection and intervention (EHDI) perceived strengths and
weaknesses, seventeen percent of respondents reported that a barrier to deaf children and their families receiving effective early intervention services was the paucity of appropriately-trained service providers. They reported that since early intervention providers are typically “generalists” who serve young children with a variety of disabilities and delays, few are actually skilled in the techniques of auditory-based habilitation necessary for working with deaf children. Simple improvements in the training of early interventionists or coordination through local early intervention agencies to siphon children with hearing loss to those providers who are qualified could remedy this problem.

Perhaps the most uncelebrated reality of education, specifically concerning children from low-SES, is one that has been proven time and again in study after study. Research shows that students from impoverished backgrounds (as well as their wealthier counterparts) perform better academically when they attend schools and classes with diverse student bodies in which the majority of students are from middle class backgrounds (Rimer, 2003; Bhargova et al., 2008). If 4201 students are to be redistributed back to their local school districts, policy makers should utilize this information to ensure that they attend diverse schools and not schools overwhelmed by the effects of poverty. It may be worthwhile to consider that, from an equity standpoint, most 4201 students currently attend schools with high percentages of children from impoverished backgrounds. While much has been made of the literature and public policy that children with disabilities should be educated alongside typically-developing peers, the calls for poorer children to be educated alongside their middle-class peers have been pushed into the background. Should 4201 students be returned to their local
districts, integrating them into public schools in impoverished areas will likely do little to increase their chances of academic success, since the public schools in these areas are plagued with the same challenges brought on by poverty.

Finally, the impact of early childhood education cannot be understated. While several “4201 schools” exist in geographic areas with limited alternative parent-infant and preschool options, most do. Improved collaboration between these entities, which include both state-funded auditory-oral and total communication programs for deaf children as well as BOCES programs, could increase economic efficiency while improving spoken language and educational outcomes for deaf children.

Section 4: Limitations of the Study

As addressed in the overview of the methodology, the researcher came from a professional and personal background that gave her a unique perspective on the “4201 schools.” The researcher’s background as a speech language pathologist working in a “4201 school” gave her a depth of experience with these schools that she did not have with local school districts or BOCES programs. The researcher also had the direct experience of working as a speech language pathologist with “4201” students, which could have possibly influenced her interpretation of interview responses and led to her inadvertently and unintentionally make certain judgments and draw conclusions about alternative settings for the “4201” students. These effects were minimized to the greatest extent possible by the use of two research assistants who served as auditors in the coding of interview and case study transcripts.

An unfortunate, but unavoidable, limitation of this study was the disproportionately small size of the LSD and BOCES groups as compared to the “4201”
Despite numerous attempts to recruit participants from local school districts and BOCES programs, only a small number of interested participants responded. This is likely due to inherent complexities in the purposeful sampling, described in the methodology. In order to be eligible for the study, participants had to have worked with at least one profoundly deaf student which, it has already been explained, most therapists have not. It is unknown whether the small number of responses was due to lack of interest or professionals’ inability to meet the requirements of the study. Perhaps a larger representation in the LSD and BOCES groups would have resulted in a different interpretation of verbal text.

Another important limitation of this study is that the participants themselves had their own biases. As discussed briefly in Chapter V, there was disagreement among the administrators regarding the “best” placement for deaf children (indeed, most administrators were vocal about believing their particular program was the most appropriate for profoundly deaf children). It can be assumed that the SLPs in the study had similar preferences and notions of the most appropriate placement for a deaf child. While the researcher can only take the participants’ statements at their face value, it is likely that interview responses contained pieces of text that reflected individual beliefs and preferences, rather than sweeping “truths.” The researcher interviewed participants, collected responses to a case study, and took field notes on the school settings; however, the researcher did not have the opportunity to observe therapists in therapy settings, or to collect other forms of data that might have more objectively demonstrated the clinicians’ skill set. The researcher could only record and interpret what the therapists reported, and
while participants shared a great deal of information, their responses to questions were likely filtered by their own biases, opinions, and interpretations of the questions.

**Section 5: Thoughts for Future Study**

This study was concerned primarily with collecting and analyzing information from therapists and administrators regarding service provision to profoundly deaf children typical of the “4201” schools. Future research into the skill set of SLPs working with profoundly deaf children should focus on the skills of those therapists working in auditory-oral environments and who target only listening and spoken language development.

In addition, future research into the efficiency and efficacy of “4201 schools” should focus on additional stakeholders, such as teachers, parents, alumni, and related service providers in order to gain their perspective and utilize their expertise in determining the course for deaf education in New York State.

Finally, if a reduction of funding for the “4201 schools” continues to be “on the table” for New York State lawmakers, lawmakers should take an inventory of 4201 school students and their corresponding individual local school districts. This would help to inform policy-makers and stakeholders as to what alternatives exist for students through their local education authority, which likely differ among the geographic areas.
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Appendix A

Participant Recruitment E-mail

Hello. My name is Michelle Veyvoda and I am a speech-language pathologist and Ph.D. student in Deaf Education at Teacher’s College, Columbia University in New York City. I am working on my dissertation under the advisement of Dr. Robert Kretschmer. I am contacting you because you work as a speech-language therapist in New York State and I am conducting a study on the experiences speech-language therapists have working with deaf children. I am currently seeking participants for
my study. I am looking to include a sample of therapists who have varying amounts of experience working with deaf children, so all therapists, regardless of their level of experience with deaf children, will be valuable to this study. Participation in this study involves meeting with the researcher for approximately one hour at your school or another location in which you feel comfortable to answer open-ended interview questions and some probing follow-up questions. In addition, participants will read a case study of a fictional deaf student and discuss how they would approach working with that child. Participants will also fill out a brief survey that will be used to collect demographic information. Participants will be compensated for their time with a gift card in the amount of ten dollars. The meeting will be audio and video-taped, and all information gathered from the meeting will be kept confidential.

I assure you that this study has been reviewed and received clearance from the Teachers College Institutional Review Board and that all measures will be taken to protect the privacy and confidentiality of participants. The decision of whether or not to participate is yours, and if you enter the study and then choose to withdraw at any time, there will be no penalty.

If you are interested in participating in this study, please contact me at mav2127@tc.columbia.edu by ___(date)__. If I receive a large number of interested participants, I may not be able to include them all in my study; in this event, participants will be selected randomly for inclusion in the study. All will be informed of whether or not they will be included in the study, and selected participants will be contacted over e-mail to schedule meetings. Thank you, and I hope to hear from you soon.

Michelle Veyvoda, M.S. CCC-SLP
Doctoral Candidate
Teachers College, Columbia University

Appendix B

Interview Protocol Page/Field Notes

Date: 
Time: 
Location: 
Participant number:
1. Thank the participant for meeting and review purpose.
2. Sign: informed consent, participant’s rights, and researcher’s verification of explanation.
3. Explain that participant has the right to withdraw at any time.
4. Give survey to fill out.
5. Turn on video/audio recording.

Reflective Notes

Questions:
   a. Tell me about your experience working with severe-to-profoundly deaf students.

   b. What have you learned about this student population by working with them?

   c. What do you believe to be the minimum standard of excellence for working with this student population as an SLP?

   d. Tell me about when and how you realized you were skilled at working with this population?
e. What can you tell me about working in this capacity with this student population that no one else can.

(Thank the participant. Discuss any follow-up measures that might be taken – including that participant may be contacted to verify the content and intentions of her interview responses.)

Appendix C

INFORMED CONSENT

DESCRIPTION OF THE RESEARCH: You are invited to participate in a research study on your experiences as a speech language pathologist working with deaf students in a school setting. You will be asked to answer five interview questions and some possible follow-up questions. In addition, you will be asked to fill out a short survey
that will be used to collect demographic information about all participants. You will also be presented with a case study of a fictional deaf student and asked to describe how you would approach working with that student. Throughout our meeting, I will periodically take notes on your responses, often referred to as “field notes.” The interviews and case study discussion will be audio and video taped. Only the primary researcher will see and listen to the tapes (see confidentiality protection section below). The primary researcher and two-to-four research assistants will read the transcriptions of interview. The research will be conducted at your school or another location that you have chosen.

RISKS AND BENEFITS: The risk to you in this study is no greater than the same risk they may encounter in a typical workday. The benefits of this study include giving all speech language pathologists being interviewed the opportunity to contribute to the expanding literature about their field. In addition, you may find it beneficial to discuss your feelings about your scope of practice and qualifications working with the deaf population. If you decide not to participate in one aspect of the study, the researcher will attempt to devise an alternative method for collecting data in that area; however, if this is not possible, the researcher may decide that you should no longer be included in the study.

PAYMENTS: You will receive a gift card in the amount of ten dollars as payment for your participation.

DATA STORAGE TO PROTECT CONFIDENTIALITY: All data collected will be anonymous. The researcher will collect data in four ways: through a survey, the taking of field notes, audio recording and video recording. Instead of using your name to label documents, audio/video tapes and interview transcripts, you will be assigned a random number and only that number will be used for labeling materials. The number assignments will be locked in a drawer in the researcher’s home, separate from the other materials. Following transcription of interviews, the recordings will be erased. Interview transcripts will be saved in password-protected files on the primary researcher’s computer. Password-protected back-ups of these files will be saved on a memory stick and locked in a drawer in the researcher’s home. Field notes and surveys will also be locked in a drawer in the researcher’s apartment. In addition, in order to protect confidentiality, no identifying information will be included in the reporting of results (e.g. the name of your school, your school district, or your city.) Only non-specific identifiers, such as “upstate,” “suburban,” or “New York City” may be used to provide more richness to the meaning of the results.

TIME INVOLVEMENT: Your participation will take approximately one hour.

HOW WILL RESULTS BE USED: The results of the study will be used for the primary researcher’s dissertation, and may be published in scientific journals or presented at educational conferences.
Appendix D

PARTICIPANT'S RIGHTS

Principal Investigator: Michelle A. Veyvoda, M.S. CCC-SLP

Research Title: The experiences of speech-language pathologists in working with deaf children

- I have read and discussed the Research Description with the researcher. I have had the opportunity to ask questions about the purposes and procedures regarding this study.
- My participation in research is voluntary. I may refuse to participate or withdraw from participation at any time without jeopardy to future medical care, employment, student status or other entitlements.
- The researcher may withdraw me from the research at his/her professional discretion.
- If, during the course of the study, significant new information that has been developed becomes available which may relate to my willingness to continue to participate, the investigator will provide this information to me.
- Any information derived from the research project that personally identifies me will not be voluntarily released or disclosed without my separate consent, except as specifically required by law.
- If at any time I have any questions regarding the research or my participation, I can contact the investigator, who will answer my questions. The investigator’s phone number is (646) 784-7370.
- If at any time I have comments or concerns regarding the conduct of the research or questions about my rights as a research subject, I should contact the Teachers College, Columbia University Institutional Review Board /IRB. The phone number for the IRB is (212) 678-4105. Or, I can write to the IRB at Teachers College, Columbia University, 525 W. 120th Street, New York, NY, 10027, Box 151.
- I should receive a copy of the Research Description and this Participant’s Rights document.
- If video and/or audio taping is part of this research, I ( ) consent to be audio/video taped. I ( ) do NOT consent to being video/audio taped. The written, video and/or audio taped materials will be viewed only by the principal investigator and members of the research team.
- Written, video and/or audio taped materials ( ) may be viewed in an educational setting outside the research ( ) may NOT be viewed in an educational setting outside the research.
- My signature means that I agree to participate in this study.
Participant's signature: __________________________ Date: __/__/__

Name: __________________________

If necessary:

Guardian's Signature/consent: __________________________ Date: __/__/__

Name: __________________________
Appendix E

Investigator’s Verification of Explanation

I certify that I have carefully explained the purpose and nature of this research to ____________________________ (participant’s name) in age-appropriate language. He/She has had the opportunity to discuss it with me in detail. I have answered all his/her questions and he/she provided the affirmative agreement (i.e. assent) to participate in this research.

Investigator’s Signature: ________________________________

Date: __________________________
Appendix F

Survey

What is your highest level of education?
__ Bachelor’s degree __ Master’s Degree __ Clinical Doctorate
__ Ph.D. __ Ed.D.

How many years of experience do you have working as a speech therapist?

How many years of experience do you have working with children with severe-to-profound hearing loss?
__ Zero __ < 5 __ 6-10 __ 11-15 __ 16-20 __ 21-25 __ 26-10 __ > 30

What is your current caseload?
__ < 10 students __ 10-15 students __ 16-20 students __ 21-25 students
__ > 25 students

What is the severity of the communication disorders of the majority of your caseload?
__ mild __ moderate __ severe __ profound

In what types of situations do you work with the students on your caseload? (Check all that apply)
__ pull-out in separate “speech room” __ push-in to general education classroom
__ push-in to special education classroom __ consulting with teachers and other professional
__ push-in to “specials” and other non-classroom activities

What is your job title?
__ Speech-language pathologist __ Speech Teacher
__ Other (please specify) ______________

What relevant professional certifications do you currently have?
__ ASHA Certificate of Clinical Competence (CCC)
__ New York State Teacher of Speech and Hearing Handicap (TSHH)
__ New York State Teacher of Students with Speech and Language Disabilities (TSSLD)
__ other (Please specify) ______________

In which of the following clinical services areas of speech language pathology do you consider yourself to be strongly experienced? (Check all that apply)
__ Apraxia of speech __ Auditory Processing
__ Augmentative and Alternative Communication (AAC) __ Autism Spectrum Disorders
__ Aural Rehabilitation __ Deaf and Hard of Hearing
__ Cognition
In which of the following clinical services areas do you consider yourself to be inexperienced?

- Apraxia of speech
- Auditory Processing
- Aural Rehabilitation
- Autism Spectrum Disorders
- Cognition
- Deaf and Hard of Hearing
- Dementia
- Early Intervention
- Fluency
- Hearing Screenings
- Language and Literacy
- Mental Retardation/Developmental Disabilities
- Orofacial Myofunctional Disorders
- Prevention of Communication Disorders
- Severe Disabilities
- Social aspects of Communication
- Swallowing
- Voice and Resonance

In which of the following clinical services areas have you pursued continuing education units (CEUs)?

- Apraxia of speech
- Auditory Processing
- Aural Rehabilitation
- Autism Spectrum Disorders
- Cognition
- Deaf and Hard of Hearing
- Dementia
- Early Intervention
- Fluency
- Hearing Screenings
- Language and Literacy
- Mental Retardation/Developmental Disabilities
- Orofacial Myofunctional Disorders
- Prevention of Communication Disorders
- Severe Disabilities
- Social aspects of Communication
- Swallowing
- Voice and Resonance

What percentage of your treatment time do you typically spend in a week treating communication disorders in the following areas:

**Articulation**
- **10%**
- **20%**
- **30%**
- **40%**
- **50% or more**

**Language**
- **10%**
- **20%**
- **30%**
- **40%**
- **50% or more**

**Fluency**
- **10%**
- **20%**
- **30%**
- **40%**
- **50% or more**

**Voice**
- **10%**
- **20%**
- **30%**
- **40%**
- **50% or more**
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<td>Auditory Training</td>
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<td>Other</td>
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Appendix G

Interview Questions for Administrators

To what extent are you involved with severely to profoundly deaf students?

To what extent are you involved with the speech language pathologists (SLPs) who provide direct services to these students?

What do you believe is your program’s capacity to provide appropriate SLP services to these students?

(For BOCES and District administrators only):

Should the “4201 schools” for the deaf close, what would your program’s capacity be to absorb those students into your program and ensure that they receive appropriate services considering their specific needs?

How prepared do you feel your SLP faculty would be to meet their needs?

(For 4201 administrators only):

Should the “4201 schools” close, how do you feel transfers to a BOCES or District setting would affect the quality of SLP services your students would receive?

How prepared do you feel your SLP faculty is to meet the needs of your students?