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Skills, Challenges, Effort, Feedback, and Setbacks:
The Role of the Deaf Educator in Shaping Student Mindsets

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Abstract

Skills, Challenges, Effort, Feedback, and Setbacks: The Role of the Deaf Educator in Shaping Student Mindsets

By

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Doctor of Education in Educational Leadership

The purpose of this study was to examine the types of mindsets, or intelligence theories, that Deaf and hard of hearing (DHH) students generally exhibit. Deafness is a low-incidence disability, affecting less than 1% of the population (Woolsey, Harrison, & Gardner, 2004). Additionally, over 90% of DHH children are born to hearing parents who do not use American Sign Language (ASL) in the home (Early Intervention for Infants and Toddlers, n. d.). Deaf and hard of hearing students are impacted throughout their schooling, in part due to frequent language access barriers. Therefore, this ethnographic, mixed methods, case-study examined teacher perceptions of DHH student responses to skills, challenges, effort, feedback, and setbacks (Dweck, 2006) in order to surmise the types of mindsets DHH students generally display.

Through this lens, it was determined that in most cases DHH students exhibited characteristics of fixed mindsets. Deaf and hard of hearing students throughout this study generally perceived skills as innate, challenges as impeding, and effort as arbitrary. Students in this study often took feedback personally, and let setbacks define them.

CHAPTER 1: Introduction

Deaf and hard of hearing (DHH) people belong to a unique, unparalleled cultural and linguistic minority (Humphries & Allen, 2008). Diversity is at the heart of the community; members are connected through culture and American Sign Language (ASL) regardless of race or ethnicity, age, gender, orientation, appearance, ability, and so forth. The common factor bringing such distinct individuals together is *Deafness*. Furthermore, members of the Deaf community include hearing Children of Deaf Adults (CODAs) and Siblings of Deaf Adults (SODAs), along with allies- or hearing people who have sought out the community as advocates for equity. Features of Deaf culture include a vast history, use of signed language, along with shared beliefs, values, behaviors, and norms. Some of the most successful Deaf people have acquired lucrative careers, positions of power, and higher education in spite of their hearing loss. With Deafness being so exceptional, DHH people are typically proud to be members of the Deaf community. Deaf people often find camaraderie within the community based on these features of Deaf culture.

While critical to recognize the pride instilled in members of the DHH community, it is also imperative to understand that DHH students are often challenged in meeting grade level content standards in K-12 schooling (Cawthon, 2004; Holcomb, 2010). The average Deaf high school graduate completes twelfth grade reading English comparable to a fourth or fifth grade student (King & Quigley, 1985). However, English competency, especially for DHH students, is by no means a measurement of intelligence. Essentially, many factors can be attributed to the inequities in achievement among Deaf students compared to their hearing peers. Perhaps the most detrimental issue is that at

least 92% of Deaf children are born to hearing parents who do not use ASL to communicate in the home (Karchmer & Michell, 2004). Most Deaf children do not have access to spoken language or ASL at home, and consequently begin school linguistically five years delayed in comparison to hearing peers who generally have access to language from birth. Thus, DHH children ultimately become English Language Learners (ELL), however, typical hearing ELLs have a stronger foundation in their first language, as opposed to DHH children who frequently do not begin learning ASL until they are school-aged. For example, children learn Basic Interpersonal Communication Skills (BICS) prior to acquisition of Cognitive Academic Language Proficiency (CALP) (Cummins, 1999). For an ELL, it takes two years to learn BICS, but between five and ten years to acquire academic language (Cummins, 1999). Thus, it is possible that the same principle is applied, as Deaf students spend the majority of their K-12 schooling trying to catch up to their respective grades both in English and ASL, BICS and CALP.

Furthermore, educating students who are DHH requires establishing and maintaining high expectations so as to prepare Deaf youth for adulthood (Egbert, LaMarr, Hossler, Davenport, & Crace, 2014; Humphries & Allen, 2008; Neria, 2014; Williams, 2014). Because DHH students' scores on standardized assessments are often quite lower than hearing adolescents', educators may not deem students capable of accessing the core curriculum (Humphries & Allen, 2008; Williams, 2014). Therefore, to ensure DHH success, educators must establish and maintain high expectations for their students, all the while providing frequent, immediate, and relevant feedback pertaining to student effort and use of strategies (Conroy, Sutherland, Snyder, Hendawi, & Vo, 2009; Dweck, 2006; Kivunja, 2014; Smith, Bicaud, Casey, & Bicaud, 2008; Wiggins, 2012). One form of

feedback is praise (Dweck, 2006), and when praise is offered to students, contingent on behaviors rather than embodiments, students may begin to develop growth mindsets (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 2006, 2007; Mueller & Dweck, 1998). Development of growth mindsets in DHH youth, may be critical in order to promote success and resilience in this marginalized group.

Adolescents who have growth mindsets appreciate a challenge, put forth effort to develop skills, and learn from their setbacks (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 2006, 2007a; Mueller & Dweck, 1998). However, those who have fixed mindsets believe intelligence and other skills are innate; they avoid putting themselves in positions to make mistakes or feel vulnerable. Moreover, youth with fixed mindsets will avoid challenges and effort, feel inadequate after a setback, and they are indifferent to correcting mistakes (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 2006, 2007a; Mueller & Dweck, 1998). Students with fixed mindsets do not recognize how putting forth more effort will contribute to growth and learning. Establishing growth mindsets could be especially critical for DHH youth, as this population frequently face setbacks that hearing adolescents could not begin to relate to. For example, Dweck (2007b) found in her research that the benefits of promoting growth mindsets were especially critical for youth who succumb to “negative stereotypes” (p. 10). When DHH students, who often struggle, believe that their intelligence can grow with effort, they may be more equipped to avoid the stigma of their disability. Therefore, this study is interested in the connection between DHH students, their teachers, and the formation of mindsets.

Statement of the Problem

Linguistic Minority

Adolescents who are DHH belong to a cultural and linguistic minority (Humphries & Allen, 2008) comprising less than 1% of the population (Woolsey, Harrison, & Gardner, 2004). When a child's Deafness interferes with access to the general education curriculum, it is considered a disability under the Individuals with Disabilities Education Act (IDEA) (Disability Rights Education and Defense Fund, n.d). However, Deaf people often consider themselves to be culturally and linguistically diverse as opposed to *disabled* (Humphries & Allen, 2008). Furthermore, Deaf people have a range of preferred languages and communication modes, levels of residual hearing, and extensive amplification options. For example, Deaf people use ASL to communicate, manually coded forms of English, or oral/aural modalities. Thus, parents of DHH children have an array of options for school settings offering a variety of resources and support for each DHH child.

With Deafness being such a low-incidence disability (Woolsey, Harrison, & Gardner, 2004), meaning less than 1% of children are identified in this way, there is a lack of research detailing best practice as far as appropriate pedagogies and methodologies are concerned (Guardino, 2008; Humphries & Allen, 2008; Marlatt, 2001, 2002, 2004; McCain & Antia, 2005; Powers, 2011; Woolsey, Harrison, & Gardner, 2004). Additionally, Deaf children are predominantly born to hearing parents who do not use ASL in the home, and are likely not familiar with the unique needs of DHH students (Karchmer & Michell, 2004). With DHH children so frequently born to hearing parents, and possibly due to the lack of research, DHH students have consistently lagged

academically behind their hearing peers (King & Quigley, 1985; Toscano, McKee, & Lepoutre, 2002). These academic setbacks may hinder DHH students from exhibiting growth mindsets, which may help them succeed during and after K-12 schooling.

Academic Setbacks

The average Deaf student graduates from high school far below the standard of hearing peers (King & Quigley, 1985). Several factors contribute to DHH students' low scores including: placements not conducive to DHH student learning, lack of consensus on most effective form of communication, lack of consensus on most appropriate pedagogies, and lack of parental signing/communication at home. Because DHH children are mostly born to hearing parents, unfamiliar with their child's unique language needs (Karchmer & Michell, 2004), educators of the DHH may play a significant role in student's lives (Marlett, 2002), and the shaping of mindsets (Dweck, 2006). Therefore, educators of the DHH should be cognizant of their interactions with this unique population of students (Humphries & Allen, 2008; Marlett, 2002; Neria, 2014; Woolsey, Harrison, & Gardner, 2004). Interactions often come in the form of educators offering their students feedback, which is a necessary aspect in education, guiding students by informing them whether they are on or off track (Conroy, Sutherland, Snyder, Hendawi, & Vo, 2009; Dweck, 2006; Kivunja, 2014; Smith, Bicard, Casey, & Bicard, 2008; Wiggins, 2012). Thus, educators should be aware of their interactions with DHH students, and their students' responses to skills, challenges, effort, feedback, and setbacks (Dweck, 2006).

Praise

A critical piece of feedback, praise, has been noted by researches to affect youth

in both beneficial and detrimental ways, depending on whether the praise is person- or behavior- contingent (Dweck, 2006; Larrivee, 2002). For example, Dweck (2006) describes how person-praise, or praising a child for his talents and skills versus process praise, or praising a child for his effort and strategies, can determine students' theories of intelligence, otherwise referred to as mindsets. Adolescents who receive person-praise may begin to develop fixed mindsets (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 2006, 2007a; Mueller & Dweck, 1998). Furthermore, youth with fixed mindsets believe that people are either skilled in certain areas or not, they do not believe that over time their intelligence can grow. On the other hand, youth who receive mostly process praise may begin to develop growth mindsets. Students with growth mindsets appreciate a challenge, they understand that intelligence is malleable, and with effort they can change their course (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 2006, 2007a; Mueller & Dweck, 1998). A notable characteristic in students with growth mindsets is resiliency (Brooks, 2001; Dweck, 2006; Egbert et al., 2014; Mueller & Dweck, 1998). Resiliency may be especially critical to develop in students who are DHH, because of inequities in achievement between hearing and Deaf youth along with social and emotional disorders, which more often plague DHH adolescents (Van Gent, Goedhart, & Treffers, 2011).

Understanding 'D' versus 'd'

A de facto understanding of the Deaf community exhibits reference to deaf, as in lowercase d, in the medical perspective of physically being deaf. Whereas, the uppercase version, Deaf, is used when referring to a person who belongs to the cultural and linguistic community (Holcomb, 2010; Humphries & Allen, 2008; Karchmer & Mitchell,

2004; Lane-Outlaw, Lange, & Sherwood, 2014; Peterson, 2012). Throughout this dissertation an uppercase D is used.

Purpose and Significance

Educators of the DHH must establish learning environments that value and promote students' linguistic, social-emotional, and cultural needs (Egbert et al., 2014; Humphries & Allen, 2008). In addition, educators of the DHH must establish high expectations for students to meet the requirements and rigorous curriculum and standards (Egbert et al., 2014; Neria, 2014). It is equally important when maintaining high expectations to promote resiliency among students (Dweck, 2006; Egbert et al., 2014). Therefore, this mixed methods ethnographic study investigated how educators of the DHH shape student mindsets and encourage resiliency, and how DHH students respond to skills, challenges, effort, feedback and setbacks (Dweck, 2006).

Teaching students to be resilient by continuing progression toward growth mindsets (Yeager & Dweck, 2012) might be one way to promote success through high expectations. Students who have growth mindsets understand that intelligence is earned through practice and determination, versus those who have fixed mindsets and believe intelligence is inherent. For Deaf youth who often struggle academically, it may be particularly crucial to provide appropriate feedback and shape student mindsets; “helping students to develop a healthy growth mindset allows them to become resilient and gives them the tools to meet high expectations” (Egbert et al., 2014, p. 89). Therefore, this study explores in what ways educators of the DHH shape student mindsets, and how DHH students respond to skills, challenges, effort, feedback and setbacks.

Research Questions

In what ways do Deaf students exhibit growth or fixed mindsets?

Sub-Questions

- 1) What are teacher descriptions of how students perceive overall skills and challenges?
- 2) In what ways do DHH students exhibit effort?
- 3) What are teacher perceptions on DHH student responses to praise and feedback?
- 4) How do DHH educators define resiliency?

Conceptual Framework

There are several concepts related to intelligence theories that are integral to the foundation of this study. These include (a) skills; “ability that comes from training or practice” (Merriam-Webster, n.d.) (b) challenges; “to be difficult enough to be interesting to: test the skill or ability of” (Merriam-Webster, n.d.), (c) effort; “a serious attempt” (Merriam- Webster, n.d.), (d) feedback; “helpful information or criticism given to someone to indicate what can be done to improve something” (Merriam-Webster, n.d.), and (e) setbacks; “a slowing of progress: a temporary defeat” (Merriam-Webster, n.d.). These factors were significant areas of focus in this research pertaining to mindsets, in order to view and analyze data. In order to tentatively surmise the types of mindsets that DHH students embody, educators shared how their DHH students typically responded to skills, challenges, effort, feedback, and setbacks. These responses indicated whether or not DHH students typically exhibited growth or fixed mindsets.

In order to promote access and success for DHH adolescents, educators may need to consider promoting resiliency in the form of a growth mindset. In the wake of the Common Core State Standards (CCSS), there is a tremendous push toward ensuring all students are college- and career-ready. Neria (2014) iterates, “tangible encouragement coupled with social and emotional support allow students to believe in themselves as they master the tasks implicit in the Common Core State Standards” (p. 6). College readiness requires that students are academically and social-emotionally prepared by educators, and have a clear understanding of their own roles and identities. Perhaps most critically is a child’s theory of intelligence; Yeager and Dweck (2012) define students with a growth mindset as those who understand that intelligence is attainable through effort, discipline, and risk-taking; youth who have a fixed mindset believe people are either born intelligent or not (Dweck, 2006). Adolescents with a fixed mindset will not make themselves vulnerable because they are intimidated by failure; in other words, they lack resiliency (Yeager & Dweck, 2012). “Students with a fixed mindset tend not to handle setbacks well, because they believe that setbacks call their intelligence into question” (Yeager & Dweck, 2012, p. 16). It may be critical to ensure that DHH youth understand intelligence is capable of growing through effort and challenges, versus the sense that intelligence is fixed and unchangeable (Dweck, 2006).

Thus, the conceptual framework guiding this study provides a lens for analyzing data as far as whether or not DHH students exhibit growth or fixed mindsets through their responses to and perceptions of skills, challenges, effort, feedback, and setbacks (Dweck, 2006). Through qualitative and quantitative inquiry, data was analyzed from classroom observations, student surveys, teacher surveys, and semi-structured teacher interviews in

hopes of determining whether or not DHH students possess growth or fixed mindsets. Dweck (2006) questions, “How can one belief lead to all this- the love of challenge, belief in effort, resilience, in the face of setbacks, and greater (more creative!) success” (p. 12)? She goes on to explain the importance of students’ perceptions of skills, challenges, effort, feedback, and setbacks- which often point to whether they have growth or fixed mindsets (Dweck, 2006). These theories of intelligence are heavily shaped through mentor feedback, coming from parents, teachers, and coaches.

Skills

While some people may thrive in certain areas over others, adolescents with growth mindsets recognize that skills can be developed over time. Dweck (2006) states, “Just because some people can do something with little or no training, it doesn’t mean that others can’t do it (and sometimes do it even better) with training” (p. 70). Students exhibiting a fixed mindset will feel discouraged if they do not possess innate skills. The consequences of a fixed mindset go even deeper, as these children will reject a challenge to learn and grow, and they will not put forth the necessary effort to succeed (Mercer & Ryan, 2009).

Challenges

Youth who have growth mindsets are also drawn to a challenge (Dweck, 2006). They understand material that does not come easy is an opportunity for growth. Furthermore, students who have growth mindsets appreciate and tackle challenges. However, adolescents who display a fixed mindset steer clear of challenges, fearing that when they are challenged- they risk looking unintelligent (Toscano, McKee, & Lepoutre, 2002).

Effort

Students with growth mindsets not only embrace challenges, but they also understand how critical effort is (Powers, 2011). Students with growth mindsets will recognize their shortcomings, and strategize, or try harder to improve. Whereas, students with fixed mindsets, “tell us that their main goal in school- aside from looking smart- is to exert as little effort as possible” (Dweck, 2006, p. 58). Students with fixed mindsets feel inadequate and unintelligent when they are putting forth effort, in fear that the effort will not pay off. Whereas, students with growth mindsets recognize the benefits of making attempts toward improvement.

Feedback

The role of feedback is critical in shaping mindsets in adolescents. Dweck (2006) states, “In fact, every word and action can send a message” (p. 173). The role of feedback is imperative in shaping mindsets. When educators offer praise to students that is person based, such as, “You are so smart,” or “You are really good at this,” students may begin to develop a fixed mindset. When they are inevitably faced with a setback- possessing a fixed mindset could be detrimental. However, process praise, or providing students feedback on strategies employed and effort exerted could shape a growth mindset (Skipper & Douglas, 2012). When students receive process praise, they may begin to understand the value in their effort, setbacks, and challenges. Thus, students with growth mindsets may be more resilient than their fixed mindset peers when they recognize the value in feedback.

Setbacks

Finally, students with fixed mindsets will struggle to recover from hindrances or

barriers in the road. Youth with growth mindsets, however, have “a special talent for converting life’s setbacks into future successes” (Dweck, 2006, p. 11). These students embrace a setback- further fostering their resiliency (Humphries & Allen, 2008). On the other hand, adolescents who have fixed mindsets see setbacks as failure (Egbert et al, 2014). Furthermore, “beyond how traumatic a setback can be in the fixed mindset, this mindset gives you no good recipe for overcoming it” (Dweck, 2006, p. 35). Students who have fixed mindsets are so discouraged by a setback, and may feel further validated in avoiding challenge and effort, in the hopes of not being perceived as incapable.

Educators of the DHH must be mindful of their feedback, as the lasting effects could contribute to one of two outcomes. Deaf and hard of hearing students can succeed comparably to, if not surpass their hearing peers in academics (Powers, 2011), or they may fall short due to possible perceived discrepancies (O’Brien & Placier, 2005; Williams 2014). Therefore, educator feedback, may play a critical role in DHH student success and resiliency.

Overview of Methodology

The present study was in the tradition of an ethnographic case study, focused on the teacher/ student relationship of the DHH social group, and how DHH student responses to skills, challenges, effort, feedback, and setbacks displayed either a growth mindset, fixed mindset, or some combination of the two (Dweck, 2006). The study utilized a mixed methods approach in exploration of the research questions to be investigated through the lens of the conceptual framework. Qualitative methods were implemented through semi-structured interviews with teachers, and field notes from classroom observations conducted at three school sites. Via classroom observations, this

study investigated whether educators of the DHH foster mindsets through praise and feedback. Interactions and dialogue among teachers and students in the areas of skills, challenges, effort, feedback, and setbacks were made note of. In addition, through semi-structured interviews with teachers, this study examined how educators define resiliency. Also, the types of feedback educators offered DHH students were examined to discover how mindsets or theories of intelligence are shaped. Interviews were transcribed, and coded to determine patterns and emerging themes related to the conceptual framework of: skills, challenges, effort, feedback, and setbacks (Dweck, 2006) within the field notes collected from classroom observations as well as interviews.

Qualitative methods were appropriate for this case study because the nature of interviews and observations were to explain and interpret the experiences and perspectives of the participants (Rossman & Rallis, 2003). Specifically, this study aimed to better understand the perceptions of teachers in terms of fostering mindsets among DHH students. In addition to qualitative methods, quantitative surveys were distributed to teachers of the DHH across the state in hopes to explore a broader understanding of how DHH educators shape student mindsets. The survey items were ranked on a six-point Likert-scale including: disagree a lot, disagree a little, disagree, agree, agree a little, and agree a lot. Finally, DHH students were surveyed to examine whether they exhibit fixed or growth mindsets. Multiple sources of data collection allowed for triangulation in the study and reduced potential systematic biases, which can occur if a single data source, method, or procedure is used (Maxwell, 2008).

School Sites

Three school sites in two school districts were utilized for this study in collecting data including: classroom observations, teacher interviews, and student surveys. The first site was a public school for the Deaf, Miller*. Additionally, a middle school Live Oak*, and high school Western* within the same district were used. Miller is a day school for DHH students, whereas Live Oak and Western were school sites with self-contained DHH classrooms on each campus.

Miller School for the Deaf is a public special education center located in a large urban school district in a metropolitan area. Nearly 130 DHH students from pre-kindergarten to age 22 attend Miller, and over 90% of the students are eligible for free or reduced lunch (Ed-data, 2015). Because I am a teacher at Miller School, I had to systematically reflect on my role as a researcher and the warnings of conducting “backyard research” (Glesne, 2016, p. 48), or research at my own school site. Despite possible dilemmas in utilizing Miller in this study, the school is unique, being one of only three schools for the Deaf in the entire state. Thus, invaluable data that may be acquired through this study may outweigh potential obstacles.

Live Oak Middle School feeds into Western High School as they are within the same district serving over 14,000 students (Ed-data, 2015). Live Oak Middle School houses nearly 900 students in sixth through eighth grade, and about 120 of those students are in special education. Of those 120 students, 12 are DHH in a Special Day Class (SDC) with a teacher of the DHH and signing paraprofessionals. Western High School serves approximately 1,900 students between ninth and twelfth grade. Nearly 150

students at Western High receive special education services. Of those students receiving special education, 35 are DHH, and take courses between four DHH teachers on campus.

Participants

State-issued credentialed teachers of the Deaf teaching in SDCs for a minimum of two years were interviewed at these three school sites to determine what praise and feedback were offered to DHH students, and student responses to skills, challenges, effort, feedback, and setbacks. In addition, field notes from classroom observations were documented and collected to examine what evidence in teacher/student interactions shape growth or fixed mindsets. Deaf and hard of hearing students ages 13-18 were surveyed from these three schools using Dweck's (2007) growth versus fixed mindset instrument for adolescents ages 12 and older. Finally, educators of the DHH were surveyed across the state to see how teachers promote growth versus fixed mindsets in their DHH students.

Role of the Researcher

This research was designed to gather data and address a perceived problem in Deaf education. Also, this study intends to provide sufficient research-based information to the institutions in consideration of change or reflection. My role as a researcher included gathering information from DHH students and the teachers who teach them in the hopes of being best able to support those students in building resiliency and fostering a growth mindset.

Limitations

The following aspects of the research study could be considered limitations:

- Research subjectivity; I currently teach at Miller School for the Deaf- one of the sites being examined;
- Site demographics and small sample size may not be representative;
- Interviews conducted in ASL and when being translated may not be exact;
- Observer effects may have hindered authenticity;
- Willing participants may not be representative of typical DHH educator demographics;
- Restricted time.

Organization of the Dissertation

This dissertation introduction includes the problem statement, as well as significance for conducting this study. The introduction also includes research questions guiding the study, the conceptual framework utilized to analyze data, an overview of the methodology, and possible limitations of the study. Chapter two synthesizes a review of relevant and recent literature addressing the problem. Chapter three outlines methodology utilized in this study including a rationale for site and participant selection, procedures for collecting data, and a conceptual framework for analysis of data. Chapter four presents the findings of the study, and draws initial conclusions. Chapter five provides recommendations for future research and practice. References and appendices are provided at the end of this dissertation.

CHAPTER 2: Review of the Literature

Introduction

Educators of the Deaf and hard of hearing (DHH) have long been concerned about how to best serve this unique population of students (Herzig, 2014; Humphries & Allen, 2008; Martin, 2012; Obrien & Placier, 2015; Schirmer, 2008; Simms & Thumann, 2007; Williams, 2014). With Deafness being a low- incidence disability, less than 1% of the population is Deaf (Woolsey, Harrison, & Gardner, 2004) there is a dearth of research to fill in the gaps (Guardino, 2008; Humphries & Allen, 2008; Marlatt, 2001, 2002, 2004; McCain & Antia, 2005; Powers, 2011; Woolsey, Harrison, & Gardner, 2004). Furthermore, within the realm of Deafness is a myriad of diversity. Deaf children can be profoundly Deaf, or have a range of hearing losses from mild, moderate, to severe. Hard of hearing children may or may not use amplification to enhance residual hearing. Deaf children utilize multiple languages and modes of communication including but not limited to, American Sign Language (ASL), cued speech, Signed Exact English and other forms of manually coded English, Total Communication, and oral/aural speech modalities. In addition, Deaf children are predominantly born to hearing parents (Karchmer & Michell, 2004) and may learn the cultural and linguistic intricacies of their community later than they are typically acquired by hearing children, from Deaf role models, possibly within their schools and educational placements.

This review of literature will begin by investigating placements for the DHH. The role of Deaf epistemology and Deaf-centered school environments are discussed. Also, how schools for the Deaf shape and develop a Deaf identity in the students they serve, as well as promote communication and culture among DHH students. In addition,

achievement of DHH students attending and overall well-being are addressed. Perhaps more critically, this review will explore the role teachers play in educating Deaf students. Because DHH students most often born to non- signing, hearing parents (Karchmer & Mitchell, 2004), educators of the DHH may take on more significant roles than educators in the general education setting (Marlatt, 2002). Then, this review considers how educators of the DHH offer praise and feedback to DHH students. Specifically outlined is the difference between process versus person-praise (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 2006, 2007; Mueller & Dweck, 1998) and the effects of this praise on a child's mindset. Furthermore, praise leading to growth and fixed mindsets (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 2006, 2007; Mueller & Dweck, 1998) is addressed, and finally the role of developing resiliency in DHH youth is discussed (Brooks, 2001; Charlson, Bird, & Strong, 1999; Dweck, 2006; Egbert et al., 2014; Mueller & Dweck, 1998; Neria, 2014).

Research Questions

In what ways do Deaf students exhibit growth or fixed mindsets?

Sub-questions

- 1) What are teacher descriptions of how students perceive overall skills and challenges?
- 2) In what ways do DHH students exhibit effort?
- 3) What are teacher perceptions on DHH student responses to praise and feedback?
- 4) How do DHH educators define resiliency?

Deaf Student Placements

When DHH children reach school age, parents have a complicated decision to make as far as school settings for their Deaf child. Options for parents of DHH children include: day schools for the Deaf, residential schools for the Deaf, Deaf programs at general education school sites, mainstream programs with interpreters, and oral/aural programs. Day schools for the Deaf and residential schools for the Deaf are established to serve DHH youth only. Day schools for the Deaf bus students in, whereas residential schools have dormitories where students reside. In contrast, Deaf programs at general education school sites may have a small number of Deaf students in a Special Day Class (SDC) on campus, or with a certificated teacher of the DHH in general education classroom settings. Deaf and hard of hearing students attending mainstream programs with interpreters are in general education classroom settings, and may be the only student with a hearing loss in the class, or have a few other Deaf peers. These students may have an itinerant teacher of the DHH who services them on a weekly basis. Finally, students who are in oral/aural programs hone their speaking and listening skills, and are either taught few or no signs, as speaking and listening modalities take precedence.

The foci of the present study were on a day school for the Deaf, and two SDCs on general education campuses. Examining the differences between schools for the Deaf, and DHH programs is critical in order to understand the ways teachers foster mindsets in different contexts. Schools for the Deaf have often touted themselves as bilingual/bicultural (Bi/Bi) educational settings (Holcomb, 2010; Lane-Outlaw, Lange, & Sherwood, 2014; LaSasso & Lollis, 2003; Peterson, 2012). LaSasso and Lollis (2003) found after distributing a questionnaire to 78 residential and day schools for the Deaf,

that 25% of residential schools considered their programs Bi/Bi, along with 20% of day schools. In addition, 25% of schools that did respond, did not consider their program Bi/Bi currently, however revealed they contemplated the transition to a Bi/Bi approach. Most Bi/Bi programs focus on developing DHH students' first language, ASL, so as to promote acquisition of DHH students' second language, English, in the written form (Lane-Outlaw, Lange, & Sherwood, 2014; LaSasso & Lollis, 2003; Peterson, 2012).

In addition, Bi/Bi programs focus on fostering Deaf culture along with seamlessly transitioning between communicating via ASL, and reading and writing English proficiently. While only a small number of DHH students nationwide attend schools for the Deaf, Cawthon (2009) explains, "District programs and schools for the deaf remain vital resources for students who are deaf and hard of hearing and their families" (p. 93). Schools for the Deaf are critical in their role of educating and advocating for DHH students (Cawthon, 2004). This is especially the case in the areas of Deaf epistemology, development of Deaf identity, communication and culture, achievement, and overall well-being of DHH students.

Deaf Epistemology

Schools for the Deaf are generally Deaf-centered institutions focused on holistically promoting students' competence in ASL, English proficiency, and development of Deaf identity (Holcomb, 2010; Lane-Outlaw, Lange, & Sherwood, 2014; Peterson, 2012). Deaf-centered institutions value Deaf epistemology (Holcomb, 2010), or Deaf peoples' accounts and experiences shaping best practice with Deaf students. In a study conducted by O'Brien and Placier (2015), there were extreme discrepancies in the way hearing teachers and Deaf teachers perceived their DHH students. For example,

Deaf teachers were more apt to believe students were capable members of a linguistic and cultural minority, versus hearing teachers' perception that Deafness is an ailment and should be corrected (O'Brien & Placier, 2015).

Essentially, Deaf epistemology is critical in educating DHH youth, because it is acquired and passed down by the historically marginalized group who has lived through the experiences and oppression (Holcomb, 2010). Because schools for the Deaf, in comparison to other programs, house more people who are Deaf with Doctoral degrees, and in leadership roles (Thumann-Prezioso, 2005), it is more likely that Deaf epistemology takes a central role in educating Deaf youth at schools designed specifically for DHH students.

Students' Deaf Identities

In addition to the necessity of including Deaf people in leadership roles for developing policy and best practice for Deaf students, there is a focus on developing Deaf student identities (McIlroy & Storbeck, 2011; O'Brien & Placier, 2015). Adolescents attending schools for the Deaf are so often born to hearing parents, thus educators must work to develop student identities. In an auto-ethnographic study conducted by McIlroy and Storbeck (2011), it was noted that Deaf adults who attended schools for the Deaf had an overall sense of belonging and pride. Adults interviewed explained that schools for the Deaf provided them an outlet of connectedness to other Deaf people along with a language-rich environment where they could use sign language as the primary mode of communication (McIlroy & Storbeck, 2011). On the other hand, findings suggested that Deaf adults who attended mainstream programs as children with hearing peers were more likely to feel ostracized; Deaf adults who were mainstreamed as children did not fully

accept their Deafness and noted attempts in behaving like hearing people to conform to the norm (McIlroy & Storbeck, 2011).

Similarly, in O'Brien and Placier's (2015) study, O'Brien stated that attending a public oral school left her feeling Deafness was "a social stigma and handicap" (p. 327). O'Brien (2015) also accounts having to "act like a hearing person" (p. 327). Holcomb (2010) describes, the responsibility of holistically teaching the child falls on the Deaf educator. Deaf educators must move beyond only teaching to the academic standards and curricula, but rather simultaneously develop an identity in students leaving them feeling proud to be Deaf, and part of the cultural and linguistic minority of the Deaf community (Holcomb, 2010; McIlroy & Storbeck, 2011; O'Brien & Placier, 2015; Thumann-Prezioso, 2005).

Communication and Culture

A feature unique to schools for the Deaf is the value placed in communicating via students' first language, ASL, and cultural components passed down through the use of ASL (Cawthon, 2004; Holcomb, 2010; Lane-Outlaw, Lange, & Sherwood, 2014; LaSasso & Lollis, 2003; Peterson, 2012; Thumann- Prezioso, 2005). In a study conducted by O'Brien and Placier (2015), the researchers found Deaf staff members collectively believed, "As with any culture, language was the medium through which new members were acculturated; therefore, they considered themselves to be a linguistic minority" (p. 329). Furthermore, the researchers noted that communication between Deaf staff and students was unrestrictive and fluid (O'Brien & Placier, 2005). When staff members and students are communicating in the same language accessible to all,

restrictions prohibiting DHH youth from access are lifted, and students have opportunities to thrive and succeed.

Mirroring these sentiments, in a study conducted by Thumann-Prezioso (2005), Deaf parents of Deaf children expressed knowledge of ASL and Deaf culture to be a critical component in the education system. The Deaf parents interviewed in this study believed that their Deaf children would be more on par with hearing students if they were granted the same access to ASL, as hearing children are to English (Thumann-Prezioso, 2005). Similarly, Wolters, Knoors, Cillessen, and Verhoeven (2012) conducted a comparative study of Deaf students' peer and teacher relations in mainstream and Deaf school settings, finding that relationships played a great role in overall well-being. More critically, communication was a key feature in how these peer and teacher relationships were developed in both school settings. Overall, great value is placed in the need for teachers who fluently and consistently use ASL to communicate in the DHH classrooms, and with the use of ASL comes rich cultural aspects of the Deaf community.

Student Achievement

In addition to the vast benefits of language- and culture- rich environments which schools for the Deaf provide, is an unprecedented spike in achievement in comparison to Deaf youth attending a mainstream program. According to Holcomb (2010), schools for the Deaf that embrace Deaf epistemology, develop students' Deaf identities, and place value in communicating via ASL, fare better on standardized assessments in comparison to mainstreamed DHH students. Cawthon (2009) also describes Deaf adolescents attending schools for the Deaf are more likely to be offered accommodations in terms of

signed instruction on standardized assessments than their mainstreamed peers, possibly attributing to their gains in achievement.

While it is widely recognized that Deaf youth do not achieve comparably to their hearing peers (Cawthon, 2004; Holcomb, 2010), there are figures to demonstrate higher achievement in Deaf students attending schools for the Deaf versus mainstream programs. For example, Holcomb (2010) reported 30%- 40% of students who attended schools for the Deaf in California in 2009, passed the California High School Exit Examination (CAHSEE) versus a 10% pass rate for students attending mainstream schools. It is likely that this gain in achievement is at least partially due to schools for the Deaf taking a Deaf-centered approach to preparing students for high stake testing, by using and valuing ASL (Holcomb, 2010).

Student Well-Being

Finally, the overall well-being of Deaf students attending schools for the Deaf in comparison to those attending mainstream programs is worth noting. Wolters, Knoors, Cillessen, and Verhoeven (2012), stated, “Deaf children in special segregated settings have generally been found to be more accepted and popular than mainstreamed deaf peers” (p. 466). It is likely that students attending schools for the Deaf are more accepted because they are the majority, surrounded by peers and adults who share the same language, culture, and values. In addition, as McIlroy and Storbeck (2011) concluded, Deaf adults who attended schools for the Deaf as adolescents collectively felt a sense of pride as opposed to their mainstream attending peers who more often felt excluded. Because students attending schools for the Deaf share a common language and culture,

they may have an overall better sense of well-being when compared to their mainstream attending peers.

Conclusion

Schools for the Deaf offer rich language and culture support to students who are DHH through Deaf epistemology, developing student Deaf identities, placing value in ASL communication and Deaf culture, and promoting Deaf students' overall well-being. Students attending schools for the Deaf have opportunities to thrive. Despite the benefits that schools for the Deaf offer, there are reasons as to why other options should still be considered. For example, while Deaf adults felt pride and connectedness attending schools for the Deaf in McIlroy and Storbeck's (2011) study, they also felt that their education may have been compromised and expectations did not parallel Deaf students' potential. In addition, Cawthon (2004) states, while Deaf adolescents may equally perform, or outperform students with disabilities on standardized assessments, she found that students attending schools for the Deaf were less successful than their mainstreamed peers when compared to hearing students in general education.

While some may oppose schools for the Deaf as settings most conducive to Deaf student's learning, it is generally agreed upon that schools for the Deaf offer language- and culture- rich environments fitting to meet the needs of DHH students (Holcomb, 2010; Lane-Outlaw, Lange, & Sherwood, 2014; LaSasso & Lollis, 2003; Peterson, 2012). In addition, schools for the Deaf are more likely than mainstream programs to promote Deaf educators to leadership positions (Thumann-Prezioso, 2005). These Deaf educators expertly pass down Deaf epistemology to hearing staff and Deaf students (Holcomb, 2010). In addition, schools for the Deaf promote Deaf identities among students, who

typically and uniquely learn language and Deaf culture at school instead of home (McIlroy & Storbeck, 2011). Schools for the Deaf value ASL/English Bi/Bi programs, which consider students' first language of ASL, and the acquisition of English through the strong foundation of ASL (Holcomb, 2010; Lane-Outlaw, Lange, & Sherwood, 2014; LaSasso & Lollis, 2003; Peterson, 2012). Furthermore, in McCain and Antia's (2005) study of Deaf youth with and without additional disabilities, the researchers indicate that due to the unique social, cultural, and linguistic needs of DHH students, a setting in which students are surrounded by other DHH youth may be the most appropriate educational placement. Thus, through Deaf epistemology, development of Deaf identities, and the value placed on language and culture, students may achieve higher academic and social proficiencies attending schools for the Deaf, and ultimately may be happier and more fulfilled than their Deaf counterparts attending mainstream school settings.

Educators of the Deaf and Hard of Hearing

Because Deafness is such a broad term, educators of the Deaf can serve in a variety of positions and for diverse purposes. When DHH students attend schools, including day schools for the Deaf and SDCs on general education campuses, teachers are most often certificated, holding a special education credential with emphasis in Deaf education. These credentialed teachers may also at residential schools for the Deaf, special programs, or as itinerant teachers. Whether or not the teacher proficiently uses ASL is completely dependent on the university or program through which the teacher received his or her teaching credential. Teachers of the DHH may also graduate from programs mainly focusing on oral/aural methods of instruction. These teachers may use

cued speech, manually coded English, fingerspelling, or no signs at all to communicate with their DHH students. All three school sites, which were the foci of this study, held philosophies on education that foster and promote a Bi/Bi approach to teaching. Thus, all teachers, Deaf and hearing, working at the school sites are proficient in both ASL and English. Therefore, the ideologies held by the schools are that students will learn ASL as their first language, and through ASL, students will learn how to read and write English.

According to Karchmer and Mitchell (2004) only 8% of Deaf children have at least one parent who is also Deaf, thus the role of the DHH educator is critical in a Deaf child's life. Many educators of the Deaf are tasked with not only teaching academic curriculum and standards, but fostering a language-rich environment that students often are not exposed to in the home (Humphries & Allen, 2008; Karchmer & Mitchell, 2004; Marlett, 2002). In addition, teachers of the Deaf often provide emotional and social supports for their DHH students (Holcomb, 2008; Humphries & Allen, 2008; Neria, 2014). Along with teaching soft-skills (Roberson & Shaw, 2015) including: effective communication, empathy, and resilience- educators of the Deaf must also teach language, all the while providing engaging academic instruction, varied individualized assessments for each child, and consistently holding high expectations for DHH student success (Williams, 2014). Therefore, it is imperative that teacher credential programs effectively incorporate all aspects involved in teaching this exceptional population of DHH youth.

Teacher Preparation Programs

As educators of the Deaf enter their teaching positions, it is widely suggested that teachers are not adequately prepared to handle the diverse and unique needs of DHH students (Humphries & Allen, 2008; Simms & Thumann, 2007). Simms and Thumann

(2007) suggest that teacher preparation programs must adjust deficit perceptions of Deaf people, which in turn would adjust appropriate pedagogies for teaching DHH students. In addition, Humphries and Allen (2008) suggest that teachers educating Deaf students must “incorporate aspects of this indigenous practice so that they may create curricula and learning environments that are strategically compatible with these children’s specific learning needs” (pp. 165-166). Educators of the DHH must be adequately prepared to address the diverse and unique needs of this student population. Moreover, as the vast majority of DHH students are born to hearing parents who do not proficiently use ASL in the home (Karchmer & Mitchell, 2004), the role of the educator who fluently and consistently signs becomes even more critical. Humphries and Allen (2008) emphasize the need for educators to not only promote fluency in ASL and English, but to incorporate ASL every day throughout classroom instruction. Because students often do not have access to ASL or spoken English in the home, the role of the educator as a language model becomes all the more critical.

In addition, because of the low incidence of Deafness as a disability (Woolsey, Harrison, & Gardner, 2004), Humphries and Allen (2008) state, “An unfortunate reality in the practice of educating deaf and hard of hearing children is that innovative teaching practices in regular education are often overlooked or deemed difficult to implement in this ‘specialization’” (p. 160). Therefore, best practice pedagogy, methods, and instruction that have been proven effective for students who are in general education may not be adopted in Deaf education because educators find these strategies difficult to implement effectively. Furthermore, Williams (2014) describes the value in Deaf educators attending workshops targeted for the general education classroom and hearing

students. For Deaf youth to be granted equal access and have the proper tools to achieve comparably to their hearing peers, educators of the DHH must be adequately trained and prepared to serve this population using research-based methodologies that are fitting for all students Deaf or hearing.

Teacher-Student Interactions

The role of the Deaf educator is critical in DHH students' lives. According to Humphries and Allen (2008), educators of the Deaf have the undertaking of providing linguistically, culturally, and socially accessible learning environments (p. 161). Seeing as how educators often take on roles outside of teaching academic curriculum, it is critical to study the influence DHH educators have on their DHH students. For example, evaluating the ways feedback offered by educators affects DHH student mindsets, along with perceptions of skills, challenges, effort, feedback, and setbacks is essential in understanding the role educators take in DHH student lives. This is especially the case because, Deaf educators may in some instances be the only language model for students. In a study conducted by Marlatt (2002) teachers of the DHH tended to view their classroom images as nurturing, safe environments, or places of refuge. Educators of the Deaf frequently prioritize language being accessible to their DHH students to promote academic growth, and foster trusting relationships. Additionally, researchers must analyze DHH teacher/student interactions to improve best practices in teaching Deaf students (Woolsey, Harrison, & Gardner, 2004). Thus, Deaf educators must consider how teacher/ students interactions, and language used and directed toward DHH students can have a huge impact on DHH youth as far as student intelligence theories.

For example, Neria (2014) suggests that when teaching DHH youth, educators must critically listen, support, and encourage their students. DHH youth must be given prompt and relevant feedback in the areas of student responses to skills, challenges, effort, feedback, and setbacks. Furthermore, students should have an outlet to express themselves to educators and peers in their natural language of ASL. In a study conducted by Humphries and Allen (2008) the value in establishing rapport with both students and parents was deemed critical as far as identifying skills the child possess rather than only focusing on their challenges. Furthermore, Dweck (2007a) goes so far as to say, “As educators, almost everything we say to our students sends a message” (p. 6). Thus, when interacting with DHH students, educators must remember their influence along with how their guidance, support, and interactions can potentially affect each individual.

Social/ Emotional Support

Along with teacher/student interactions as a critical piece in Deaf student’s education and success, is the social and emotional support provided by educators which helps to shape DHH youth into young adults who become productive members of society. Van Gent, Goedhart, and Treffers (2011) state, “the majority of hearing parents and teachers may have problems in recognising the emotions of deaf children and discussing these with them. As a result, they may be less capable of judging their self-esteem” (p. 726). Simms and Thumann (2007) suggest mitigating this problem by providing students with an environment in which ASL is valued and used as the primary mode of communication, they suggest that this will enhance overall academic, social, and emotional growth. Neria (2014) also discusses the importance of providing “tangible encouragement” (p. 6) with social and emotional support for DHH students. Educators of

the DHH must advance beyond the curriculum and standards so as to prepare their DHH students for life beyond the K-12 school setting. As Holcomb (2008) suggests,

The research agenda of deaf scholars has leaned heavily toward documenting the survival techniques of deaf people in the relatively hostile environments of hearing families and hearing-centric education programs instead of focusing solely on the academic achievement of deaf students (p. 476). Thus, it is the job of the Deaf educator to progress beyond the academic standards and expectations, but rather holistically teach the child and incorporate life lessons and skills so each child can reach their fullest potential academically, and social-emotionally as members of the Deaf community.

In studies conducted by Marlatt (2001, 2002), educators of the DHH were surveyed to determine how they view their own roles, student roles, and the role of the classroom. Findings suggest that teachers most often viewed themselves as an “artisan” or a “custodian” (Marlatt, 2001, 2002). Both of these terms indicated teachers perceive their role in the classroom as encouraging coaches, and/or nurturing and parent-like. Deaf and hard of hearing students were most often viewed by teachers as “apprentices, followers, models, audiences, and my children” (pp. 350-351). In Marlatt’s (2001, 2002) studies, DHH educators did not primarily view themselves as instructors, nor did they view their students as learners (Marlatt, 2001, 2002), and the classroom was mostly viewed as “refuge,” or a nurturing environment. Because of the multilayered roles DHH educators take on between instructor, coach, parent, and nurturer, the way in which teachers of the Deaf interact with, and provide social and emotional supports to their DHH students is of utmost importance. Educators must be cognizant of their praise and feedback with students. DHH students may benefit when their educators, who they have

formed strong bonds with, encourage them to develop new skills through effort, confronting challenges, and overcoming setbacks. Educators of the DHH may have a strong influence on whether students will succeed, be resilient, and foster growth mindsets through the language and feedback they provide these students.

Expectations

Finally, a critical component that educators of the DHH must take into consideration is the need for establishing and maintaining high expectations (Dweck, 2006; Egbert et al., 2014; Humphries & Allen, 2008; Neria, 2014; Williams, 2014). This is complicated when educators may perceive DHH students as discrepant from their hearing peers (Humphries & Allen, 2008). For example, educators may be under a false pretense that students cannot achieve proficiency, so they do not teach certain content. When the child is not adequately educated, he will not perform on standardized assessments, and the teacher is validated in believing that the Deaf child was never capable of learning said content in the first place (Williams, 2014). Due to this cycle, Deaf students as a whole are too often “undereducated and underprepared” (Humphries & Allen, 2008, p. 161). Breaking this cycle is critical in DHH student success. DHH students must be perceived as equally capable to their hearing peers, so as to minimize this achievement gap prohibiting opportunity and access.

In addition, Simms and Thumann (2007) describe the low achievement of Deaf students is often perpetuated by low expectations, further leading to DHH students’ low self-esteem. For DHH youth to be successful throughout their schooling and seamlessly transition through milestones such as primary school, to junior high, to high school, to post-secondary school or careers, educators of the Deaf must establish and maintain high

expectations. High expectations directly align with providing DHH students rigorous learning opportunities and appropriate assessments measuring student progress over time (Williams, 2014). When educators of the Deaf establish and maintain high expectations, students will rise to the occasion, and may feel more confident in their own abilities.

Conclusion

The Deaf educator uniquely takes on multiple roles as deliverer of curriculum and instruction, guidance counselor, and at times nurturer and caregiver (Marlatt, 2002). As DHH teachers must juggle the demands of teaching the curricular standards, and developing DHH students socially and emotionally, it is critical that educators of the Deaf have thorough training on how to best meet the needs of this diverse population of students. Educators should be abreast on best practices for students with and without disabilities beyond their Deafness (Guardino, 2008; Humphries & Allen, 2008; Williams, 2014); they should be cognizant of their interactions with DHH students, and how these interactions affect each child. In addition, educators must establish and maintain high expectations for their Deaf students (Egbert et al., 2014; Humphries & Allen, 2008; Neria, 2014; Williams, 2014), ensuring engaging and rigorous curriculum and instruction, along with meaningful learning activities are provided to these students. Furthermore, educators of the Deaf should understand the role of feedback, which affects student mindsets. Mainly, DHH educators should understand how their feedback influences student perceptions of skills, challenges, effort, feedback, and setbacks- further developing the child's theory of intelligence.

Because educators of the Deaf can have a tremendous impact in student lives, studying the ways in which DHH youth and teachers interact in the classroom was

imperative (Woolsey, Harrison, & Gardner, 2004). Specifically, researchers must examine what praise and feedback educators offer students who are DHH, shaping their mindsets and essentially establishing resiliency in this historically marginalized group.

Deaf and Hard of Hearing Students

As placements for the Deaf vary in services rendered, and educators of the Deaf vary in credentials, DHH adolescents vary as well. Some DHH youth are profoundly Deaf, whereas others have mild to moderate hearing losses. In addition, a portion of Deaf students may choose to use amplification such as hearing aids, cochlear implants, and Frequency Modulation (FM) systems to enhance residual hearing, whereas others prefer no amplification at all. Along with severity of hearing loss, and amplification used, is preferred mode of communication. Some students use ASL as their primary form of communication, while others utilize speaking and listening modalities, and yet other students utilize manually coded forms of English. In addition, students may be prelingually or postlingually Deaf, meaning they became Deaf either before they acquired expressive language or after, affecting their oral speech aptitudes.

Because Deafness is a low incidence disability, there is little research detailing the basics of appropriate pedagogies in teaching DHH pupils (Marlatt, 2001; Simms & Thumann 2007; Woolsey, Harrison, & Gardner, 2004). To make matters more complicated, Deaf students often have additional needs beyond their Deafness (Guardino, 2008). For example, DHH youth may have special needs in addition to being Deaf, or their parents may speak other languages aside from English in the home. The percentage of all students in the U.S. labeled in the 2011/2012 academic year with receiving special education services was 12.9% (Snyder, Dillow, & National Center for Education

Statistics, 2013). Of those students receiving special education, less than 1% are DHH; however, 40% of students who are labeled DHH as a primary disability, are diagnosed with special needs beyond their Deafness including but not limited to autism and intellectual delays (Guardino, 2008).

Because of this disproportion, youth who are Deaf and have needs beyond their Deafness are overrepresented in comparison to students who have special needs in the general education population. Therefore, students who have needs beyond their deafness may be what educators consider the “norm,” due to minimal experience with typical Deaf adolescents. Furthermore, because Deaf students often perform poorly on standardized assessments in comparison to their hearing peers, there is seldom an appropriate level of accountability in educators of the Deaf (Cawthon, 2009). When the expectation is that students will not perform, they do not, and this comes with no surprise; as O’Brien and Placier (2005) put it, “The “failure” of deaf students thus becomes a self-fulfilling prophecy” (p. 323). Factors contributing to this complexity in Deaf education include labels of students who are DHH. For example, students who are Deaf are automatically placed in special education because of their Deafness disability (Disability Rights Education and Defense Fund, n.d). However, Deaf youth may be more on par with that of their hearing peers in terms of social and communicative competencies (McCain & Antia, 2005). In addition, many Deaf students have proven to be extremely successful in spite of their hearing loss (Powers, 2011; Toscano, McKee, and Leoutre, 2002). Thus, despite variances in the umbrella DHH term, it is the responsibility of educators of the Deaf to meet the needs of this unique population of students through appropriate feedback, which may foster growth mindsets.

Labels

Deaf and hard of hearing students are routinely eligible for special education services due to their disability according to the Individuals with Disabilities Education Act (Disability Rights Education and Defense Fund, n.d.). In addition to special education, when a student's parents indicate on the California state mandated Home Language Survey (HLS) the primary language in the home is something other than English, students are automatically assessed and potentially labeled English learners (EL) and after five years of not gaining proficiency, long-term English learners (LTEL) (California English Language Development Test (CELDT), 2014). Despite DHH students' lack of access to spoken language, students still may be classified as EL or LTEL based on a parent's responses to the HLS.

Moreover, DHH students have unique language access barriers affecting appropriate services and assessments to fit their needs (Cawthon, 2009). Also, DHH students may be subject to curricula developed for hearing students, ELs, and students with cognitive delays; often failing to acknowledge the language, culture, and richly visual way that Deaf youth learn (National Center on Accessible Instructional Materials, n.d.). To tap into DHH students' greatest potential for learning, it is imperative to leverage their unique linguistic and cultural needs such as of use of visuals and signed language (Snoddon, 2010). Because this often does not happen in Deaf education, DHH students may lack enthusiasm for education and consequently struggle (Snoddon, 2010). Additionally, McCain and Antia (2005) state that students who are Deaf and have needs beyond their Deafness are "a neglected group, and research regarding their performance is scarce" (p. 21). Furthermore, Young, Green, and Rogers (2008) state, "deafness in a

range of familial, social and institutional contexts may interact with variables and processes that render its disadvantaging effects more likely” (p. 43). Deaf and hard of hearing students are seldom taken into consideration in the larger context of best practice in education.

At the three settings for this study, the problem can be seen in DHH students’ continuous failed state assessments designed for general education hearing students, students with cognitive delays, ELs or LTELs. ELs and LTELs often struggle toward academic progress, however this does not necessarily mean DHH students under these categories have cognitive delays. It is paramount to note that DHH students are confronted with unique language access barriers reaching beyond a label of disability or English learner. Youth who are DHH are more than capable, but seldom receive the adequate language stimulation necessary to ensure academic gains comparable to their hearing peers.

DHH and Hearing Comparison

Furthermore, in a study conducted by McCain and Antia (2005), Deaf youth with no disabilities beyond their Deafness were considered comparable to their hearing peers in the areas of communicative and social skills. However, students who had needs beyond their Deafness received significantly lower scores, indicating that Deaf adolescents with no additional disabilities may be more comparable to hearing youth on the general education curriculum, than students who have special needs.

While achievement data and research shows that Deaf students as a whole are not academically comparable to their hearing peers (Cawthon, 2009), other risk factors of deafness are cited as well. For example, DHH youth may be more at risk for “emotional

and behavior disorders” in comparison to hearing adolescents (Van Gent, Goedhard, & Treffers, 2011, p. 720). Thus, educators of the DHH are responsible for holistically teaching the Deaf student, who may be more at risk than hearing youth academically and social-emotionally due to the unique needs of Deafness.

High Achieving DHH Students

Despite vast research indicating that students who are DHH perform poorly in comparison to their hearing peers, there is still a body of research highlighting Deaf individuals with profound or severe hearing loss who have proven to be successful (Charlson, Bird, & Strong, 1999; Luckner & Muir, 2001; Powers, 2011; Toscano, McKee, & Leoutre, 2002). In a study conducted by Toscano, McKee, and Leoutre (2002), researchers found that one major factor attributed to profoundly Deaf college student success with English literacy was a “positive self image” (p. 22). Deaf and hard of hearing college students were most successful, for example, when they held attitudes of perseverance and resiliency (Toscano, McKee, & Leoutre, 2002). Similarly, in a study conducted by Powers (2011), severely or profoundly Deaf students identified as high achievers showed “determination” and put forth great “effort” according to their teachers (Powers, 2011, p. 97). Paralleled results were found in Charlson, Bird, and Strong’s (1999) study, where DHH students who were the most successful shared a common trait of resilience. Thus, despite being considered disabled and placed in special education, DHH individuals are still “aiming for careers in very competitive areas like medicine and law” (Powers, 2011, p. 97).

Although Deaf adolescents typically complete high school with literacy skills subpar in comparison to their hearing peers (Toscano, McKee, & Lepoutre, 2002), this

can be attributed to several factors. For example, profoundly Deaf adolescents do not have access to spoken language at home or at school, and often times do not have access to communication including sign language at home as well. For educators to adequately prepare Deaf students for college and careers, Bouffard and Savitz-Romer (2012) suggest, “Identity, motivation, self-regulation, and relationships are central to the developmental processes that influence postsecondary success” (p. 40). It is evident that Deafness alone does not determine the success or failures of the child. Thus, it is critical for educators of the DHH to promote student self-efficacy to progress toward academic and social-emotional success in response to skills, challenges, effort, feedback, and setbacks.

Conclusion

Because Deafness in and of itself is such a broad term, it is critical to take into consideration the population of students this study is addressing. The present study is examining DHH students enrolled in SDCs and primarily use ASL to communicate. Deaf students in this study are placed on the general education curriculum in grades 8-12. However, DHH students considered in this study may be pre- or post-lingually Deaf. Students may have Deaf or hearing parents, and they may or may not have access to ASL in their homes. Deaf and hard of hearing students in this study may be labeled ELL in addition to their special education labels. Deaf and hard of hearing students considered for this study broadly range in English literacy proficiencies, and competency.

In addition, it is critical to understand how the low-incidence of Deafness, and consequent lack of research affect this exceptional population of students. For example, researchers need to explore what types of praise, feedback, and constructive criticism

educators of the Deaf provide to their students. This is especially this case as research shows that students who are DHH typically perform poorer than hearing peers academically (Cawthon, 2009; Toscano, McKee, & Lepoutre, 2002), yet there are exceptional cases in which DHH students academically, social-emotionally, and communicatively perform equal to or superior to their hearing peers. This is typically the case when Deaf youth harbor resilience- possibly fostered by educators in response to skills, challenges, effort, feedback, and setbacks. Thus, researchers must investigate how educators can offer effective praise and feedback so as to promote self-regulative skills and determination in their DHH students, both keys for success.

Praise and Feedback

A critical factor in students becoming autonomous and successful young adults, is educators' deliverance of praise and feedback. It is generally agreed upon that praise and feedback used effectively in the classroom will improve students academically, social-emotionally, and behaviorally (Conroy, Sutherland, Snyder, Hendawi, & Vo, 2009; Dweck, 2006; Kivunja, 2014; Smith, Bicard, Casey, & Bicard, 2008; Wiggins, 2012). One definition of feedback offered by Wiggins (2012) is, "information about how we are doing in our efforts to reach a goal" (p. 11). Whereas Conroy et al. (2009) define feedback as "information provided to children by teachers regarding their understanding or performance of academic or behavioral tasks" (p. 21). Feedback can either be instructive, or corrective (Conroy et al., 2009, p. 21), however Wiggins (2012) cautions that feedback is not advice or recommendations on how to improve, but rather information provided reflecting progress toward a goal.

Regardless of the definition, the aspects researchers consider fundamental to effective feedback are fairly consistent. For example, researchers agree that feedback should be provided immediately (Conroy, Sutherland, Snyder, Hendawi, & Vo, 2009; Kivunja, 2014; Smith, Bicard, Casey, & Bicard, 2008; Wiggins, 2012). Smith, Bicard, Casey, and Bicard (2008) actually suggest feedback should be provided to the student within one to two seconds following the behavior. In addition, researchers highlight that feedback should be specific, individualized, sincere, and behavior-oriented (Bronson, 2007; Conroy, Sutherland, Snyder, Hendawi, & Vo, 2009; Kivunja, 2014; Smith, Bicard, Casey, & Bicard, 2008; Wiggins, 2012). Bronson (2007) goes so far as to say that children, seven years of age and older, begin to question how authentic praise actually is, cautioning that in addition to specific, individualized, and process-oriented praise, genuine sincerity is a critical component for praise effectiveness.

When providing praise and feedback to students, it is imperative to take into consideration the different forms of feedback and their implications for the child. For example, feedback can be provided to the child as a reinforcement to stay on track, or in a corrective nature to adjust process. In addition, praise and feedback should be modified to fit the needs of each child. For example, students in primary grades will receive and respond to praise differently than a student in high school (Conroy et al., 2009). Finally, most researchers agree that praise should not be related to a product, or innate abilities, but rather to the process and strategies used, regardless of whether the child succeeded in getting the answer right (Conroy, Sutherland, Snyder, Hendawi, & Vo, 2009; Dweck, 2006; Kivunja, 2014; Smith, Bicard, Casey, & Bicard, 2008; Wiggins, 2012).

Instructive Feedback

Students rely on feedback to adjust their course of action, and to know whether or not they are progressing in the right direction. Thus, it is the role of the educator to provide continuous and consistent feedback to youth (Conroy, Sutherland, Snyder, Hendawi, & Vo, 2009; Kivunja, 2014; Smith, Bicard, Casey, & Bicard, 2008; Wiggins, 2012). Educators need to inform students when they are headed in the right direction, or completely off track. If students are not provided immediate and consistent feedback, they may find the praise abstract or difficult to connect with. When providing instructive feedback, or feedback acknowledging students' responses or behaviors were correct, Conroy et al., (2009) suggest first, recognizing that the response was correct in a matter-of-fact approach, and then extending understanding by providing further details. This method deters the educator from mistakenly praising the students' ability or intelligence as Dweck (2007b) cautions, "praising students for intelligence gives them a short burst of pride, followed by a long string of negative consequences" (p. 36). Thus, by simply acknowledging the response was correct, and providing a deeper understanding, the child may feel challenged and prouder of their efforts rather than their correct response.

Instructive feedback, however, is not offering praise for abilities. Statements like, "you're so smart," and "you're good at this," can cause a child to start seeing in black and white. For example, adolescents who receive this kind of person-praise may begin to think that people are either adept or inept in certain disciplines, and they start to avoid taking academic risks. Instructive feedback is a key to success, as students need to be informed when they are on the right track. However, instructive feedback does not have to be in the form of praise necessarily, and this form of feedback is more of a tool

educators use to extend student understanding rather than praise their innate abilities and skills.

Corrective Feedback

Conroy et al. (2009) relate corrective feedback to “error correction” (p. 21), similarly called constructive criticism. Corrective feedback, like instructive feedback, is key for academic success. The process of providing corrective feedback to adolescents includes four aspects: informing the child that he or she did not produce correctly, providing the correct response, allowing opportunity for responding a second time, and finally praising for cooperation (Conroy et al., 2009). As students experience a setback in which corrective feedback is necessary, it is arguably more valuable to praise the student under these circumstances than when the child is correct. However, as noted, the praise should be for effort, challenge, and process rather person or product.

Corrective feedback is a critical component in education so as to improve students’ overall understanding of academic material. However, corrective feedback can lead to negative feelings and embarrassment in adolescents. In a study conducted by Seevers, Rowe, and Skinner (2014) the researchers found that students receiving negative feedback in the forms of product, such as grades, should be provided this feedback in private. Otherwise, the teacher risks a dive in student motivation, feelings of fairness, and dissatisfaction. Therefore, while providing corrective feedback is necessary, educators should be cognizant as far as how they deliver this feedback to students, especially those who may already be vulnerable to emotional distress.

Behavior Contingent Praise

In addition to providing feedback validating that students are correct, or adjusting the path when they are wrong, is the role of praise. Praise is a specific form of feedback that can either make or break a child (Dweck, 2006). While most agree that praise and feedback are mostly beneficial for students, some would argue otherwise. For example, when praise is targeted at innate abilities, intelligence, or talents, students may develop negative attitudes toward praise and fail to take risks academically. While most educators and researchers would agree that offering behavior contingent praise is of benefit to the child, there are still discrepant cases that challenge those findings. For example, Skipper and Douglas (2012) found that when students are doing well, they respond equally regardless of receiving person-praise, behavior contingent praise, or no praise at all. The findings did conclude, however, that when a child has not succeeded, he responds more favorably to process praise (Skipper & Douglas, 2012).

Additionally, Larrivee (2002) outlines a lengthy list of reasons praise can be more detrimental to a child than helpful. For example, the researcher suggests that students may perceive praise as manipulative or irrelevant. In addition, students may begin to rely on praise in order to feel worth, and develop a sense of learned helplessness when they are no longer receiving the same consistent and abundant praise (Larrivee, 2002). The researcher suggests an alternative as far as encouraging the student in place of praise (Larrivee, 2002). Regardless of what it is called, the consensus seems standard; students should be informed when they are both on and off track. In addition, students should be informed that the effort they have exerted, and the strategies employed may be the most critical component in the big picture.

Praise in the Secondary Setting

Because the present study explores students who are ages 13 and older, it is imperative to not only examine the effects of praise on students in general, but more specifically those in the secondary classroom setting. For example, studies have shown that students who receive positive praise in secondary settings may feel embarrassed, or uncomfortable with the praise (Conroy et al., 2009; Larrivee, 2002). Furthermore, students who receive praise in secondary settings respond differently to praise than those in the primary grades. Educators must be cognizant of how they offer praise or encouragement to students in the secondary educational setting. They should be aware that these students may actually prefer to be praised in private, and may even respond better when praised in a more personal context (Larrivee, 2002). If secondary students are consistently praised in front of their peers, they may begin to resent the praise or even lash out to avoid being praised (Conroy et al., 2009; Larrivee, 2002). Thus, educators should not only be aware of the differences between process and person-praise, but they should also understand that the dynamics of offering praise differ in the secondary setting compared to primary settings.

Conclusion

It is evident that the role praise and feedback takes in the classroom is largely character building for students. Conroy et al., (2009) suggest, “When used effectively, teacher praise and feedback have a long history of contributing to positive classroom outcomes for children with learning and behavior problems” (p. 23). Process praise has proven to be an effective form of feedback for typical and atypical students alike (Dweck, 2006). However, insincere, irrelevant, or person-praise may have unintended and

negative effects when the child develops a sense of learned helplessness, or relies on adult approval to feel good about themselves (Dweck, 2006; Larrivee, 2002; McCrone, 1979).

Thus, providing feedback is a critical and necessary component of educating adolescents. When students get the answer right, educators need to confirm the answer is right and for instructive feedback to be most effective, the educator will follow up by providing a deeper analysis of said correct answer (Conroy et al., 2009). When students are incorrect, the educator must also provide timely and constructive feedback, along with allowing students the opportunity for correcting their mistakes, and praising the cooperation and effort (Conroy et al., 2009). Educators should make sure to guide the student in finding the correct answer, and follow up by praising effort toward the challenge or setback. As the research suggests, praise is most effective when it is directly related to effort or strategies employed, versus innate abilities, smarts, skills, or intelligence. If students receive praise for mundane tasks, or frequent and insincere praise, they may not reap the same benefits that process praise offers to students (Dweck, 2006, 2007a). In addition, the wrong kind of praise can create a learned helplessness in adolescents (Larrivee, 2002). This is especially problematic for youth who are DHH, and may be more vulnerable to learned helplessness (McCrone, 1979).

Mindsets

The feedback educators of the DHH provide their students is critical on so many levels. Constructive criticism, or corrective feedback, is a necessary aspect in education to ensure that students are made aware, and provided the tools to adjust, when they are not behaving, or not academically on track (Conroy et al., 2009; Dweck, 2006). Aside

from corrective feedback is the role of praise, which surprisingly enough can have both a positive and negative affect on the child depending on the type of praise offered. In fact, Dweck (2006) suggests that the way in which educators praise their students have implications on what types of mindsets these adolescents embody. Furthermore, researchers have long agreed on the positive effects of behavior contingent praise. Thus, educators should keep in mind the difference between praising students for their innate, natural abilities and praising youth for their efforts and strategies.

In multiple studies conducted by Dweck and colleagues (2006), researchers looked beyond the effects of praise and into what effects this praise had on student mindsets. Dweck (2006) suggests that when students are praised for effort, and strategies employed, the child will begin to internalize and display a growth mindset. On the other hand, if a child is praised for natural and innate abilities, these students will begin developing and displaying characteristics of a fixed mindset (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 2006; Mercer & Ryan, 2008). Student's theories of intelligence may have a serious impact on their contributions as functional members of society.

Growth Mindsets

Youth exhibiting growth mindsets understand that intelligence is malleable. These students will put forth effort to achieve, and may be more motivated to learn than their fixed mindset peers. Students who have growth mindsets are more likely to take academic risks; for example, these adolescents understand that setbacks are opportunities for growth, thus they do not let setbacks "break them." Students who exhibit growth mindsets understand that if and when they inevitably get the answer wrong, putting in more effort in terms of study time, tutoring, and practice, will assist them in mastering

any task or skill. The benefits of students exhibiting growth mindsets are endless.

It was also determined by Dweck and colleagues (2006) students who exhibited growth mindsets outperformed their peers embodying fixed mindsets. By fostering the growth mindset intelligence theory, educators can harness student aptitudes in areas where they have fallen short.

Fixed Mindsets

On the contrary, students who display characteristics of a fixed mindset may want to be perceived as smart. These students do not like to put forth effort because they feel that trying hard validates the fact that they are struggling. Students with fixed mindsets think that when someone is talented, or skilled in certain domains, these aptitudes come naturally. When students who have fixed mindsets are encountered with setbacks, they are embarrassed, they feel dumb, and they may even lie about how poorly they performed.

Students exhibiting fixed mindsets are vulnerable to academic failure. In addition, according to Blackwell, Tzvetnievski, and Dweck (2007) students who are entering junior high school are the most at risk for academic failures, and setbacks. If these students are not well equipped with the appropriate tools for handling these failures, students may develop fixed mindsets and struggle in future endeavors, or worse, give up.

Mindsets of Diverse Students

Multiple studies conducted by Mueller and Dweck (1998) indicate that students who embodied growth mindsets reaped great benefits that their fixed mindset peers did not. In addition, it was noted that these adolescents responded to mindset and theories of intelligence pretty uniform regardless of gender, ethnic groups, and cultures (Mueller &

Dweck, 1998). These results are promising as far as students who are DHH are concerned. In addition, Mercer and Ryan (2009) had similar results in terms of students who are English Language Learners. The researchers highlighted the importance of mindsets for students are ELL when learning and mastering English. English language learners who embodied growth mindsets were more apt to acquire English than their fixed mindset peers. Again, this research is critical for DHH students because it has been noted that DHH students are considered ELLs, when their first language is ASL. Therefore, DHH youth may have more opportunity for academic successes when growth mindsets are fostered.

In yet another study conducted by Gutshall (2007), it was noted that teacher mindsets influenced students as well, however, the researcher suggested that students' disabilities and genders did not affect whether or not the teacher believed that child was capable of achieving (Gutshall, 2007). Therefore, it is quite evident that students who are DHH may reap great benefits when growth mindsets are fostered and valued by educators who teach DHH adolescents.

Conclusion

Deaf students should understand that intelligence is not fixed, but developed over time. When adolescents embody growth mindsets, they will be more apt to take on challenges, and academic risks (Dweck, 2006). In a study conducted by Toscano, McKee, and Lepoutre (2002), it was determined that the most successful and literate Deaf college students "had personality characteristics that enabled them to believe they could overcome setbacks and succeed" (p. 22). Establishing self-regulative strategies in DHH students is critical in order to prepare these students for enduring the high standards and

difficult expectations of school. It is especially critical for students who are already considered “disadvantaged” to embody growth mindsets. While educators cannot ignore student socioeconomic statuses, genders, races, social classes, parent educational levels, and so forth, at minimum they can foster growth mindsets in all youth and provide a more level playing field.

There are so many approaches that educators can take, either making or breaking student motivation. So many things that are nonchalantly said in the classroom, could cause a student to either develop a growth or fixed mindset. For example, by disclaiming a problem may be “easy” to start, students who struggle do not see the value in their efforts, and thus may develop a fixed mindset (Sparks, 2013). Furthermore, problems that we may consider “easy” are inevitably going to be more of a challenge for some students than others. Therefore, we must be cognizant of how our language affects every child in the classroom. There is an abundance of evidence to support that students who embody growth mindsets are far more successful than students who exhibit fixed mindsets (Dweck, 2006). Students with growth mindsets understand that their intelligence can only build from where they currently are as far as academics go. Therefore, educators must continually strive to ensure students understand that intelligence builds through effort, attention to challenges, processing feedback, overcoming setbacks, and learning skills.

When students are provided the appropriate tools to foster growth mindsets, they flourish. Students are able to maintain confidence (Dweck, 2007a) despite setbacks and failures when they employ growth mindsets. Students know how to set appropriate and attainable goals with growth mindsets. The best way to foster growth mindsets in

students is to offer behavior contingent praise. More specifically, educators must praise students for strategies employed, and effort exerted when confronted with a challenging task. When students are provided appropriate praise, this will often result in a growth mindset. Furthermore, one key characteristic of a growth mindset is resilience (Dweck, 2006). Resilience is a critical factor for students to succeed throughout their schooling. This is especially the case for students who are already challenged with extenuating circumstances, such as DHH youth. Because DHH students are confronted with the struggles of being English language learners, labeled as disabled, and typically academically achieving lower than their hearing peers, fostering resilience in DHH students in order to promote an overall better sense of well-being is crucial.

Resilience

In a review of resilience literature in the context of Deaf adolescents conducted by Young, Green, and Rogers (2008), the term *resilient* is defined as, “The factors, processes and mechanisms which, in the face of significant risk/ trauma/ adversity/ stress/ disadvantage, nonetheless work to able an individual, family or community to thrive and be successful” (p. 43). Yeager and Dweck (2012) more simply define resilience as “whether students respond positively to challenges” (p. 302). Finally, Merriam-Webster defines resiliency as “an ability to recover from or adjust easily to misfortune or change” (n.d.). Regardless of definition used, researchers concur the benefits of promoting resilience in students with and without disabilities are vast (Brooks, 2001; Charlson, Bird, & Strong, 1999; Dweck, 2006; Mueller & Dweck, 1998; Egbert et al., 2014; Neria, 2014). When providing process praise to youth, educators take steps toward fostering growth mindsets (Dweck, 2006); one mainstay of growth mindsets is resilience. In fact,

Dweck (2006) suggests that appropriate process praise results in both motivation and resilience. These characteristics of a growth mindset can be invaluable for DHH students.

While fostering and promoting resilience in students is a critical component of teaching across disciplines, it may serve greater purposes when working with students with diverse needs (Brooks, 2001; Charlson, Bird, & Strong, 1999; Egbert et al., 2014; Mueller & Dweck, 1998; Neria, 2014). In all aforementioned definitions of resilience, a key component is the ability to overcome hardships (Yeager & Dweck, 2012; Young, Green, & Rogers, 2008). Young, Green, and Rogers (2008) state, “Deaf children, in common with children with disabilities and other marginalized groups, are subject to the considerable influence of institutional and structural discrimination as well as the social processes of stigma and, additionally, the consequences of communication disadvantage” (p. 47). Because DHH adolescents are faced with hardships every day as far as communication and academic struggles, it goes without saying that developing resiliency in DHH students is a critical component for success.

Students with Disabilities

Brooks (2001) explains some of the most critical embodiments an educator of students with learning disabilities should hold is being cognizant of social-emotional needs, and being empathetic. Educators should create meaningful learning activities for students who have disabilities, where students have opportunities to succeed and genuinely feel proud of their accomplishments (Brooks, 2001; Dweck, 2006). Neria (2014) suggests utilizing the phrase “I will try” (p. 6) with students who are DHH so as to

promote the idea of praising and encouraging effort. There are vast benefits of promoting resiliency in students, especially those who are already disadvantaged.

Conclusion

Deaf and hard of hearing students are a unique population of adolescents who are often not given the same access to research-based pedagogies used in the general education school setting. DHH students have a spectrum of needs depending on their residual hearing levels, amplification, communication modes, whether they have needs beyond their Deafness, whether ASL is used in the home, and so forth. Deaf and hard of hearing students attending schools for the Deaf are in unique education settings that are typically Deaf-centered institutions valuing ASL. However, DHH students may also attend SDCs on general education campuses, mainstream placements, and so forth. Furthermore, educators of the DHH often take on the role of “parent” with students who are DHH.

In addition, DHH educators may be some of the only language and social models for youth who are Deaf. Thus the praise and feedback educators of the Deaf offer their DHH students is critical. When providing feedback to students, educators of the DHH must bear in mind the difference between person and process praise. Educators should not praise students for abilities and talent, otherwise called person-praise. This type of praise often leads students to develop fixed mindsets. When students have fixed mindsets, they may begin to believe that intelligence is fixed, and they are not capable of growing. However, when educators utilize process praise, and praise students for effort exerted and strategies employed students may begin to develop growth mindsets. When students exhibit growth mindset characteristics, they are more apt to understand that their

intelligence is malleable. Students who employ growth mindsets enjoy challenging content and they appreciated the process of thinking and strategizing. In addition, when educators foster growth mindsets in students who are DHH, they are often encouraging resiliency as well. Students who are resilient fare better academically, social-emotionally, and behaviorally compared to their fixed mindset peers. It is imperative for researchers to study whether or not DHH students exhibit growth or fixed mindsets. In addition, it is critical for researchers to investigate in what ways educators of the DHH shape mindsets in their Deaf students by providing feedback and praise to students. Furthermore, researchers should explore how DHH students respond to skills, challenges, effort, feedback, and setbacks in order to determine whether DHH youth exhibit growth or fixed mindsets.

CHAPTER 3: Methodology

Introduction

Educators of the Deaf and hard of hearing (DHH) promoting resiliency and explicitly teaching self-regulative strategies to students may be critical in order to promote DHH student success. According to Dweck (2006), when educators deliver praise for innate abilities or intelligence, adolescents begin to develop a fixed mindset. Students with fixed mindsets perceive setbacks as failure, which may stifle their own potential because of their inability to see that intelligence is malleable. On the other hand, students who have growth mindsets are more apt to persevere in the face of setbacks (Dweck, 2006). The purpose of this study was to examine the types of mindsets DHH adolescents exhibit, along with ways in which educators of the DHH may foster student mindsets.

Research Question

The research questions guiding this study include: In what ways do Deaf students exhibit growth or fixed mindsets?

Sub-questions

- 1) What are teacher descriptions of how students perceive overall skills and challenges?
- 2) In what ways do DHH students exhibit effort?
- 3) What are teacher perceptions on DHH student responses to praise and feedback?
- 4) How do DHH educators define resiliency?

Chapter Overview

This research was in the tradition of an ethnographic multiple-case study. Data were collected through surveys of DHH students in SDCs, as well as field notes from classroom observations. In addition, surveys were distributed to educators of the DHH and interviews were conducted. This chapter includes the research tradition utilized, as well as the research settings, data sources, and sample. Additionally, data collection instruments and procedures are identified and described. Finally, methods used for analyzing data via a conceptual framework are detailed, along with my own role as the researcher.

Research Tradition

An ethnographic multiple-case study approach was utilized to better understand DHH student mindsets and how educators of the DHH foster these mindsets. A case study approach was most appropriate with the intention being to understand a broad idea through purposeful and direct study of a specific situation (Rossman & Rallis, 2003). Moreover, the following case study was in the tradition of ethnography. An ethnographic lens is most appropriate to explain and interpret (Rossman & Rallis, 2003) perceptions, as well as study patterns and norms within a cultural and social group (Bloomberg & Volpe, 2012; Schram, 2006), such as the DHH. The qualitative tradition of ethnography represents “both a process and a product” (Schram, 2006, p. 68). Therefore, throughout data collection both the methods as well as the conceptual framework of DHH student skills, challenges, effort, feedback, and setbacks (Dweck, 2006) were considered. This study describes patterns (Schram, 2006) in aspects of Deaf culture and values related to promoting mindsets in DHH students, a historically marginalized group.

This ethnographic case study explored DHH student mindsets along with the ways in which educators of the DHH foster mindsets among their students. The goal of this multiple-case study (Miles & Huberman, 1994) conducted at three school sites, was to describe in what ways educators of the Deaf promote DHH student mindsets. The main research question sought to examine the types of mindsets adolescents who are Deaf encompass. In addition, this study described the ways in which educators of the DHH foster and develop mindsets in DHH students. Developing growth mindsets in DHH students and explicitly teaching self-regulative strategies (Dweck, 2006) may be imperative because Deaf students often struggle in K-12 schooling, and generally read below grade level (Humphries & Allen, 2008; O'Brien & Placier, 2015). When DHH students graduate high school and enter either postsecondary education, or a career, they will inevitably have setbacks. Setbacks can cause the student to feel inadequate and possibly give up on their goals (Dweck, 2006; Humphries & Allen, 2008). Therefore, the research questions utilized for this study mainly focused on DHH student mindsets, critical for success during and after high school, along with how educators may shape these mindsets.

In addition, this research thoroughly delved into the rich and vast culture of Deaf students as well as educators of DHH students. Through researching this culture via ethnographic procedures, the internetworks of Deaf culture, values, and norms, along with American Sign Language (ASL) were reviewed to determine how these characteristics of Deaf culture contribute to fostering mindsets in DHH students. Finally, ethnographic case studies tend to utilize methodology such as observations of the cultural group in their natural setting, and interviews with members of the cultural group

(Creswell, 1994). Because the methods of this study consisted of observations and interviews, an ethnographic case study was the most appropriate tradition. Essentially, the goal of this ethnographic case study was to identify and describe the ways in which DHH student mindsets are shaped and hopefully, initiate change (Bloomberg & Volpe, 2012) to better serve this historically marginalized group.

Research Settings

This multiple-case study (Miles & Huberman, 1994) investigates three school sites on the basis of DHH student mindsets, and how educators of the DHH shape these mindsets. By using three school sites rather than one, credibility and dependability in the findings increased (Miles & Huberman, 1994). The three school sites are located in the same state; one of the sites specifically accommodates DHH students, whereas the other two sites have SDCs for their DHH population on general education campuses. One of the research sites is a public special education day school, whereas the other two sites are general education campuses with SDCs and teachers of the DHH. The makeup of the SDCs within all three schools are fairly similar. Deaf students at all sites are taught Common Core State Standard aligned curricula and instruction via ASL and printed English. Deaf and hard of hearing students are divided into self-contained classrooms per grade level at Miller, but span at Live Oak and Western. For example, at Live Oak students in sixth through eighth grade were in the same classes, and at Western juniors and seniors were observed in the same classrooms.

Miller School for the Deaf is a public special education center located in a large urban school district in a metropolitan area. Miller School was established in the late 1960s, and was one of the first schools to offer an ASL/ English bilingual program.

Instruction at Miller is delivered entirely in ASL, and English is taught to DHH students in its written form across grade levels. Miller houses approximately 130 DHH students from pre-kindergarten to age 22, and is the only school in the large urban district to specifically serve DHH students. Predominantly Latino students attend Miller and nearly half of the student population are considered English Language Learners (ELLs) (Ed-data, 2015). In addition, over 90% of students are eligible for free or reduced lunch (Ed-data, 2015).

Because I am a teacher at Miller School, throughout this research I had to be cognizant of my role as a researcher and the warnings of conducting “backyard research” (Glesne, 2016, p. 48). In some cases, novice researchers who conduct studies at their own place of work compromise the research design (Glesne, 2016) due to systematic biases. However, because Miller is one of only three schools for the Deaf in the entire state, the benefits of utilizing this school site for this research study may outweigh potential drawbacks.

Live Oak Middle School and Western High School are schools within the same district, a relatively short distance from Miller School for the Deaf. Live Oak Middle School provides instruction to DHH students in sixth, seventh, and eighth grades. Students in all grades are in one self-contained SDC, and some students are mainstreamed, or pulled from their SDC with an interpreter, for other classes. The teacher at Live Oak middle school was hearing; she utilized a Total Communication (TC) approach, and wore an FM. The teacher at Western high school was Deaf; she primarily used ASL, but also incorporated spoken language for her students who were hard of hearing and reliant on audible English to comprehend the content.

Sampling Strategies

The three school sites were selected based on a criterion sampling strategy in which specific prerequisites of each site were considered (Miles & Huberman, 1994). The criteria included school sites in the same state, serving students who are DHH in self-contained classrooms. By using this criterion, schools where DHH students are mostly mainstreamed with hearing students in general education, or enrolled in programs at general education school sites with interpreters were eliminated. After criterion were established, a networking snowball strategy was employed (Glesne, 2016). Due to, “constraints of time” (Glesne, 2016, p. 55) taken into consideration, and for matters of convenience, Miller School for the Deaf, Live Oak Middle School, and Western High, located relatively close in proximity, were the three sites selected for this study.

After utilizing criterion and networking strategies to determine which sites would be examined for this research study, a stratified purposeful strategy (Miles, & Huberman, 1994) was considered. Stratified purposeful strategies are used to compare research sites with similar or comparable demographics (Miles & Huberman, 1994) yet, separate conditions. By using this “comparable case selection” strategy (Miles & Huberman, 1994, p. 28), Miller, Live Oak, and Western can be compared on similar criteria. The major difference is that Miller is a day school for the Deaf housing multiple SDCs, whereas Live Oak and Western have SDCs with credentialed teachers of the DHH on general education campuses. However, all three school sites house students who are Deaf and primarily communicate in ASL. Because the purpose of this study is to examine DHH student mindsets, and whether teachers shape mindsets, these school sites offered ample access to DHH students as well as educators of the DHH. In addition,

utilizing a stratified purposeful strategy for site selection sampling provided more confidence in the findings (Miles & Huberman, 1994).

Data Sources and Sample

In conducting this study, multiple data sources were utilized. First, DHH students served as data sources via surveys and classroom observations. In addition, credentialed teachers of the DHH working in special day classes (SDCs) were data sources through interviews, surveys, and classroom observations. In selecting the participants for this study, a criterion strategy (Glesne, 2016) was employed. This criterion strategy contributed to quality of the overall study (Miles & Huberman, 1994). For example, students in this study were DHH, enrolled in SDCs at either Miller School for the deaf, Live Oak Middle School, or Western High School. All teacher participants were credentialed teachers of the DHH, teaching in SDCs at Miller, Live Oak, or Western, with a minimum two years of teaching experience. These criteria ensured that the study purpose stayed true in evaluating DHH student mindsets, and how these mindsets are shaped by educators. After criteria were established, a network strategy (Glesne, 2016) was utilized, in which participants were informed of the research study, invited to participate, and offered small compensation, a ten-dollar gift card. Participants included two teachers from Miller School; one Deaf, and one hearing. In addition, one hearing teaching at Live Oak and one Deaf teacher at Western participated in this study.

Pseudonym	School	Gender	Aural	Years Teaching	Ethnicity
RR	Miller	Male	Hearing	2	Latino
TG	Miller	Male	Deaf	22	White
LJ	Western	Female	Deaf	7	White
CH	Live Oak	Female	Hearing	14	White

Rationale

In order to explore how educators of the DHH shape mindsets in their DHH students, credentialed teachers of the DHH teaching in SDC settings were interviewed. Teacher/student interactions in the classroom were also observed to assess how mindsets are developed, and what praise and feedback educators provide DHH students. It was critical to utilize credentialed teachers of the DHH with a minimum of two years of teaching experience for this study. Because over 90% of Deaf children are born to hearing parents who do not sign (Early Intervention for Infants and Toddlers, n. d.), teachers arguably have some of the most prominent influence in DHH adolescents' lives; therefore, it is imperative to understand how teachers foster mindsets in DHH students. Communication with educators was via email to ensure eligibility and willingness to participate in the study.

Sample Characteristics

The teachers participating in this study were state-issued credentialed educators of the DHH who work at Miller, Live Oak, or Western in SDCs, and have taught a minimum of two years. Each teacher was credentialed to teach DHH students from birth to age 22. The student participants were DHH adolescents ranging in 8th -12th grades.

All teachers and students use ASL as their primary form of communication at the school sites.

Protecting Participants

Participant identities are concealed with the use of pseudonyms. In addition, all participants provided informed consent forms in which they acknowledged that they were cognizant of the parameters of the study. Participants signed consent forms agreeing to partake in the study. It was critical to obtain informed consent so that participants understood the purpose of the study, and potential contributions to education (Beck, DuPont, Geismar-Ryan, Henke, Pierce, & Von Hatten, 2001). Finally, participation in the study was completely voluntary, and participants had the option to withdraw at any time without consequence.

Data Collection Instruments

Instruments utilized in collecting data included: an interview protocol, structured observation guide, and surveys. The interview protocol (Glesne, 2016) (See Appendix A) guided the interviews with teachers of the DHH in determining in what ways these educators shape mindsets in DHH students. Furthermore, students and teachers were observed in their natural classroom settings to investigate (Glesne, 2016) student/teacher interactions, including what praise educators offered DHH students. Through classroom observations, field notes were documented from a structured observation guide (See Appendix B). In addition, teachers of the DHH were surveyed (See Appendix C) across the state to determine the ways in which educators shape mindsets in DHH students. Finally, DHH students were surveyed (See Appendix D) to explore whether they currently possess growth or fixed mindsets (Dweck, 2006).

Description of Data Collection Instruments

Data collection began through individual semi-structured interviews (Glesne 2016) with teachers. The interviews followed a pre-established protocol (Bloomberg & Volpe, 2012; Glesne, 2016); however, minor modifications to the protocol were at times necessary based upon individual responses. The interview protocol was derived from the research questions and included follow-up questions, along with probes established to elicit more information from the interviewees when needed (Glesne, 2016). Prior to conducting interviews with participants, three interviews were piloted (Bloomberg & Volpe, 2012; Glesne, 2016) beforehand to ensure the issues that arose were addressed. This assisted in avoiding re-interviewing participants due to adjustments made to the protocol later in the process (Glesne, 2016). In addition, piloting interviews ensured modifications made to the protocol were based on authentic responses from the pilot interviews rather than anticipated responses.

Next, field notes from classroom observations were documented to determine how educators of the DHH shape mindsets in students. Four classroom observations were conducted so as to better understand the cultural intricacies (Spradley, 1980) within the DHH classroom from a researcher's perspective. Thorough field notes from classroom observation including: dialogue, behaviors, and interactions between teachers and students (Bloomberg & Volpe, 2012) were documented. An established observation guide was utilized in documenting field notes, which ultimately assisted in keeping consistency among observations throughout this study. The observation guide included a physical description of the environment, for example the size and layout of the classroom, along with the people occupying the space. In this observation guide, the

number of students in the classroom, as well as students' ages, genders, races, and other defining characteristics were documented. Finally, talk and activity among participants throughout observations were documented, and themes related to the research questions were noted throughout.

Additionally, surveys were distributed to teachers of the DHH across the state. The surveys aimed to deduce what educators of the DHH say and do to shape mindsets in their DHH students. The surveys included eight items to be rated on a Likert-scale, along with five open-ended response options inquiring how educators teach students self-regulative strategies, and what praise educators offer to DHH students. Finally, students were surveyed to explore whether these DHH youth exhibit growth or fixed mindsets (Dweck, 2006). A published survey, developed by Carol Dweck (Mindset Works, n.d.), for youth and adults 12 and older was used. The survey included eight questions and a six-response Likert-scale from disagree a lot- to agree a lot, with no neutral response.

Rationale for Instruments

Interviews are an invaluable tool used in qualitative research for the purpose of gaining insight into participants' perceptions and experiences (Glesne, 2016). Through conducting interviews, the opportunity to thoroughly listen (Glesne, 2016; Seidman, 2006) and reflect on participants' testimonies presented itself. After conducting interviews with teachers of the DHH, and utilizing the same consistent protocol, interviews were transcribed and themes and contradictions that emerged throughout data analysis were synthesized.

In addition, observations were especially critical in this ethnographic case study, as participants in "their natural settings" (Bloomberg & Volpe, 2012, p. 252) were

observed. Through classroom observations, the types of praise educators of the DHH offered to students was evident along with how teacher/student interactions affected student mindsets. Classroom observations helped to supplement interviews by highlighting consistencies or incongruities from data gathered via interviews alone.

Last, surveys provided both quantitative and qualitative (Bloomberg & Volpe, 2012) data to enhance the data and findings. Through surveys more educators were reached than with just interviews and observations alone. The surveys supplemented this study by adding a richness through gaining access to multiple educators beyond the scope that purely qualitative research could access. In addition, surveys with DHH students provided an additional piece of data to help build the case in evaluating what types of mindsets these adolescents have, and the patterns among students who exhibit growth versus those who exhibit fixed mindsets.

Data Collection Procedures

Specific data collection procedures were set in place through conducting interviews with teachers of the DHH, observing self-contained DHH classrooms, and finally distributing surveys to DHH students and teachers of the DHH. Interviewing teachers of the DHH provided vast data regarding the insiders' perspectives on how and what fosters mindsets among DHH youth. Ethnographic observations provided a basis for understanding a community of people; specifically, their attitudes, beliefs, and positions (Glesne, 2016). Observations were a critical aspect in conducting this qualitative research, as they provided a natural, authentic understanding of the participants (Glesne, 2016). Finally, surveying DHH students and teachers provided macro, overarching data to supplement the micro and focused qualitative methodology.

Procedures

To conduct interviews, the process began by contacting the gatekeepers, or the principals, of Miller, Live Oak, and Western in order to determine one or two potential teachers to be interviewed at each school site. By utilizing a networking strategy, the principals and myself were able to identify which teachers were willing to participate. Next, we negotiated days and times that were most convenient for all party's schedules so we could make further arrangements. Once a date and time were established, the interview protocol was utilized to ensure the interviews stayed on task and pace. Interviews with teachers at Miller School were conducted outside of the school site to ensure interviewees felt more comfortable and willing to share. Prior to conducting the interviews, a computer was set to video record. The participants were greeted and thanked for their willingness to participate in the study. In addition, participants were reminded that the goal of the study was to inform best practice for teachers of the DHH, as far as how to foster mindsets in DHH students. It was critical to build rapport (Glesne, 2016) with the participants so that they felt comfortable sharing and responding to the interview questions.

The interviews began with a grand tour (Glesne, 2016) question to help the teachers become comfortable with the process of interviews and further establish rapport. The protocol was followed, utilizing appropriate probes and clarifying questions on an individual basis, when necessary. Mostly open-ended questions (Glesne, 2016) that were not leading were asked, and examples and stories were elicited from the participants to drive home their points. Finally, questions were wrapped-up, ensuring to conclude by allowing the participants to make any additional comments. While two of the interviews

were with hearing teachers, and conducted in spoken English, the other two interviews were with Deaf teachers, conducted in ASL, and all were video-recorded. After the interviews were recorded, I translated the two with Deaf participants from ASL to English and finally, transcribed the four interviews.

In addition to conducting interviews with teachers of the DHH, students and the teachers interviewed were observed in their natural context (Glesne, 2016), the classroom. After utilizing the networking sampling strategies to select teachers to interview and observe, teachers who opted to participate in the study were contacted. Once teachers had been made aware of my role, and signed informed consent, classroom observations were scheduled. Prior to observations, teachers were reminded how they would introduce me to the class, as a researcher. I arrived before the scheduled observations so as to not disturb or interrupt instruction. I made connections between what was observed and the parallels to the research purpose and questions. When leaving the field, I made arrangements with the teacher beforehand to be the least disruptive.

Along with interviews and observations, surveys were distributed to DHH students in the classrooms observed, and separate surveys were distributed to teachers of the DHH across the state. Surveys issued to students had eight items rated on a six-point Likert-scale. The questions aimed to explore the types of mindsets that are embodied by DHH students in SDCs. Surveys were distributed to Deaf students ages 13 to 18 at Miller, Live Oak, and Western. Items were translated from English to ASL by a native signer. The signed survey was then put on a hard-drive, and distributed to the teachers to promote standardization. Students' responses were completely anonymous, and quantitative data collected from surveys were compiled to supplement the qualitative

research. In addition to student surveys, teacher surveys were distributed to educators of the DHH. The surveys asked teachers to rate their responses on a Likert-scale. I used a professional organization that I am a member of to gain access to teachers of the DHH across the state. A member of this organizations board distributed surveys online using a list-serve of DHH educators involved with the organization. Survey responses were directly emailed to me; no identifying information was included so as to protect respondent confidentiality.

Rationale for Procedures

Interviews provided rich testimonies of how DHH teachers believe they shape mindsets in their students. Through establishing procedures, consistent interviews were methodically conducted. The interviews each followed the same protocol, which assisted in ensuring that data collected was fair and reliable. The established set of procedures promoted the interviews being uniform. Classroom observations provided a detailed and in-depth picture (Glesne, 2016), to better understand how educators interact with DHH students, and in what ways praise and feedback shape or do not shape mindsets in these adolescents. Through classroom observations, the cultural practices (Spindler & Spindler, 1989) which unfolded in the classroom affecting students' mindsets were documented. By distributing surveys among teachers of the DHH, a broader idea of happenings in the classrooms to shape mindsets were gained. This quantitative piece supplemented the qualitative data to provide a better understanding overall as to the ways in which educators influence DHH student mindsets. Ensuring consistent data collection procedures are utilized aided in consistent and methodical practices throughout the study.

Data Analysis

Once data had been collected, three phases of data analysis were navigated through including: preliminary, thematic, and interpretation. In the preliminary data analysis phase, interviews were transcribed and participant confidentiality ensured. Then, data was thematized by coding, analyzing, and drawing relationships. Finally, patterns and themes emerging from data were interpreted in aims to make recommendations based on the findings. Throughout data analysis areas that may affect the analysis procedures were identified. For example, being cognizant of researcher effects was critical as well as utilizing strategies to mitigate these effects, so as not to skew how the data was viewed and analyzed. Furthermore, I journaled to keep my biases at the forefront of my mind through the reflexive practice (Carlson, 2010). This helped to ensure that I acknowledged my biases, which may otherwise have hindered the lens in which I filtered data through.

Preliminary Data Analysis

After collecting data from classroom observations, ethnographic interviews, and surveys with students and teachers, preliminary data analysis began. Preliminary data analysis entailed transcribing interviews from audio recordings, as well as video recordings of interviews conducted in ASL. To transcribe interviews in ASL, I first voiced over the interviews in English, and proceeded by transcribing the interpreted audio files. From the transcribed interviews, data was coded and analyzed via a conceptual framework to then identify and organize thematically. The conceptual framework used to analyze the data directly related to student resiliency in the areas of skills, challenges, effort, feedback, and setbacks (Dweck, 2006). Thus, through

classroom observations, interviews, and survey data I began analyzing DHH student mindsets and resiliency.

In this preliminary phase of data collection, overarching concepts (Bloomberg & Volpe, 2012) were identified, furthermore data was segmented, codes applied, and analytical memos (Glesne, 2016) created. Key terms, concepts, and ideas were used from the literature to code and identify relationships between segments of direct quotes. In addition, measures were updated to securely store and retrieve data. Pseudonyms were used to identify subjects, making participants unidentifiable. Direct identifiers and corresponding pseudonyms were stored on a password protected computer in a locked cabinet. Once direct identifiers had been redacted from the data, data were stored on an external hard-drive.

Thematic Data Analysis

After preliminary analysis procedures were underway, thematic data analysis began. Through thematic analysis I made meaning of the data by segmenting, coding, clustering, and networking. Research questions, the conceptual framework, and literature served as a guide for coding transcribed interviews, field notes from observations, and open-ended survey responses. Segments of direct quotes were extracted and each of the portions were coded accordingly. In addition, I recorded analytic memos (Glesne, 2016) to document patterns. Through memoing, developments in the research process and data collection were documented. Also, notes were gathered as to how this research progressively addressed the research questions (Glesne, 2016). Next, I made meaning of codes related to the conceptual framework of skills, challenges, effort, feedback, and setbacks by clustering similar codes and labels into families. These families were based

on the conceptual framework of students' skills, challenges, effort, feedback, and setbacks (Dweck, 2006). I networked by organizing clusters and families of codes and further drawing relationships from one to another. Finally, data was thematized by interpreting the networks and making meaning of patterns derived from data. After identifying underlying themes and patterns within data, the results were interpreted.

Interpretation of Results

From the preliminary and thematic data analysis, tentative conclusions were drawn. The results were interpreted through the lens of the conceptual framework, and literature. The thematic data provided a better understanding of how DHH student mindsets affect their responses to skills, challenges, effort, feedback, and setbacks (Dweck, 2006). These interpretations provided a basis for making further recommendations to assist educators of the DHH in promoting strategies for enhancing DHH student resiliency.

Roles of the Researcher

As an educator of DHH students, I certainly have my own preconceived notions and biases that could potentially affect this research study (Bloomberg & Volpe, 2012; Glesne, 2015). First of all, I am a teacher at one of the school sites where this study took place. I have taught at Miller School for the Deaf for five years, and student-taught for an additional sixth year. Because of my strong ties to Miller, I needed to ensure that relationships and ties did not affect the spirit of my study. I established specific procedures to ensure that I kept the research purpose at the forefront of my mind, in addition to the goal of informing practice.

I was aware that over 70% of secondary teachers (grades sixth through twelfth) at Miller School were DHH; I am hearing. Although I am fluent in ASL, and conduct all of my instruction purely via ASL, this was not my first language and I am not a native signer. Thus, I was cognizant of what and how Deaf people, native to the language and culture, foster mindsets in their DHH students. In addition, I am an educated, middle-class, White woman, so I must consider that 98% of students attending Miller are Latino or Black (Ed-data, 2015); in addition, over 90% qualify for free or reduced lunch (Ed-data, 2015). Working with a population of students and teachers who come from different backgrounds than my own as far as abilities, languages spoken, cultures, education level, and socioeconomic statuses, it was critical to reflect on how my background and biases could potentially affect my role as a researcher. These characteristics that embody who I am, in many ways differ from that of my participants. Therefore, I needed to ensure protocols were underway to alleviate any assumptions (Bloomberg & Volpe, 2012).

A major assumption and bias I held in conducting this study was that DHH students are underprepared for college and careers. While I believe that DHH students are aptly capable, I also believe that DHH students are neither taught key strategies in being resilient, nor do they fully comprehend *resiliency*. Therefore, with observations and interviews being conducted with participants from Miller, I had to keep my biases in check. Additionally, I ensured reflexivity (Carlson, 2010) by being upfront with my biases and using a systematic way, including journaling, to ensure that my assumptions and beliefs were recorded for further reflection (Bloomberg & Volpe 2012).

To make this study as trustworthy and credible as possible, I utilized several strategies so as to minimize my researcher bias. Because I work at the school site where I conducted this research, one strategy I used to mitigate researcher effects was to interview participants off-site (Glesne, 2015). Participants at Miller see me in the role of “teacher”; thus, they may not have reacted to me purely if interviews were to be conducted at Miller. Because Miller School is the only context in which I have interacted with most of the teachers, an off-site interview was more likely to provide participants with an opportunity to share out in a less structured setting. For data to be as authentic as possible, it was critical to ensure the environmental effects of participant and researcher influence were as minimized as possible. In addition, I utilized triangulation (Bloomberg & Volpe, 2012) in this ethnographic case study to establish credibility and lessen biases. I conducted observations of DHH teacher interactions with students, and I conducted open-ended interviews with teachers of the DHH. Through multiple sources of data collection including student and teacher surveys, classroom observations, and teacher interviews, I analyzed and synthesized data. Through data analysis, emerging patterns and themes were identified from different sources, in turn systematically reducing biases. Then, I provided thick description (Bloomberg & Volpe, 2012) from my observations and accounts. This thick description ensured as much detail as possible was included, avoiding omitting information, and staying as true to the observation as possible. In addition, thick description makes transferability (Bloomberg & Volpe, 2012) from this study more possible.

Finally, I established member check procedures (Carlson, 2010; Glesne, 2016), which ensured my Deaf participants had the opportunity to review English transcripts

from the interviews conducted in ASL. Once the interviews had been filmed and transcribed, I returned the English transcripts to the participants for review, and to confirm accuracy in word-choice, and “voice.” Because the interviews were translated from ASL to English, it was critical that the participants interviewed had the opportunity to review the transcripts, and approve the translation as a true interpretation of their responses in ASL.

Thus, the ultimate goals of this study were to explore in what ways educators of the DHH shape student mindsets through feedback and praise. Through qualitative and quantitative inquiry this study investigated how educators shape student mindsets, and how students respond to skills, challenges, effort, feedback, and setbacks.

CHAPTER 4: Findings and Results

Introduction

Previous studies have suggested that Deaf and hard of hearing (DHH) adolescents require unique instruction and curricula aligned to their diverse needs; taking into consideration the frequent language access barriers at home (Berchin-Weiss, Falk, & Cunningham, 2016). With DHH youth most often born to hearing parents who do not communicate using American Sign Language (ASL), teachers of the DHH are one of the biggest driving forces in development of student mindsets, or theories of intelligence. Thus, the present study focused on the types of mindsets DHH students exhibit, and in what ways educators of the DHH shape these mindsets via the conceptual framework of student responses to skills, challenges, effort, feedback, and setbacks (Dweck, 2006) (Figure 1).

It is especially critical for DHH students to exhibit growth mindsets due to barriers they experience that are generally not experienced by their hearing peers. For example, DHH adolescents more often than not are unable to fluidly communicate with persons in their home (Karchmer & Michell, 2004). Furthermore, DHH youth typically struggle to meet grade level content standards, frequently due to language delay (Cawthon, 2004; Holcomb, 2010; King & Quigley, 1985). In addition, research suggests that there is a correlation between family income and Deafness, thus children who are from low-income families are more likely to be Deaf than children from families with average wages (National Center on Health Statistics, 1990). Finally, DHH adolescents are often pitied by hearing people who are unfamiliar with the Deaf community, and capabilities that DHH youth have to offer (Lane, 1988). For DHH students to be

successful throughout their primary and secondary education, as well as college and careers, it is critical to consider shaping students' theories of intelligence to align with that of a resilient growth mindset.

The following chapter outlines the ways in which students responded to skills, challenges, effort, feedback, and setbacks (Dweck, 2006) in their classroom settings. Additionally, surveys and interviews reflect teacher perceptions on student responses to the conceptual framework. Finally, student surveys serve as the final data source in surmising whether DHH students exhibit growth or fixed mindsets.

As with any population of students, whether hearing or Deaf, English Language learners or native speakers, students with needs and students without, some students exhibit growth and some students exhibit fixed mindsets. However, throughout this study, DHH adolescents were generally perceived as demonstrating fixed mindsets based on educator perceptions of DHH student responses to skills, challenges, effort, feedback, and setbacks. Ultimately, throughout this study a handful of DHH students exhibited growth mindsets, however most seemed to exhibit fixed mindsets. Via classroom observations, teacher interviews, along with student and teacher surveys, it was evident that in most cases DHH student responses to skills, challenges, effort, feedback, and setbacks indicated a fixed mindset.

Research Questions

The research questions that guided this study include: In what ways do Deaf students exhibit growth or fixed mindsets?

Sub-questions

- 1) What are teacher descriptions of how students perceive overall skills and challenges

- 2) In what ways do DHH students exhibit effort?
- 3) What are teacher perceptions on DHH student responses to praise and feedback?
- 4) How do DHH educators define resiliency?

FIXED MINDSET		GROWTH MINDSET
<ul style="list-style-type: none"> • SOMETHING YOU'RE BORN WITH • FIXED 	SKILLS	<ul style="list-style-type: none"> • COME FROM HARD WORK. • CAN ALWAYS IMPROVE
<ul style="list-style-type: none"> • SOMETHING TO AVOID • COULD REVEAL LACK OF SKILL • TEND TO GIVE UP EASILY 	CHALLENGES	<ul style="list-style-type: none"> • SHOULD BE EMBRACED • AN OPPORTUNITY TO GROW. • MORE PERSISTANT
<ul style="list-style-type: none"> • UNNECESSARY • SOMETHING YOU DO WHEN YOU ARE NOT GOOD ENOUGH 	EFFORT	<ul style="list-style-type: none"> • ESSENTIAL • A PATH TO MASTERY
<ul style="list-style-type: none"> • GET DEFENSIVE • TAKE IT PERSONAL 	FEEDBACK	<ul style="list-style-type: none"> • USEFUL • SOMETHING TO LEARN FROM • IDENTIFY AREAS TO IMPROVE
<ul style="list-style-type: none"> • BLAME OTHERS • GET DISCOURAGED 	SETBACKS	<ul style="list-style-type: none"> • USE AS A WAKE-UP CALL TO WORK HARDER NEXT TIME.

Figure 1

Skills

Research suggests that a child exhibiting a growth mindset will recognize that skills are developed and honed over time (Hochanadel & Finamore, 2015) and youth with fixed mindsets believe that intelligence is predetermined and incapable of growth. This study provided an opportunity to allow students' voice to describe where and how those mindsets get shaped. Throughout this study, DHH students indicated in most cases that they did not believe intelligence was fixed. When adolescents understand that intelligence and skills are not innate, they begin to possess the tools in order to exhibit

growth mindsets, recognizing that they have the capacity and capabilities to grow and improve with time. The survey distributed to teachers, however, demonstrated that educators mostly agreed and agreed a lot to praising students for “innate” abilities and intelligence. When teachers provide person-praise, students begin to believe that their skills and intelligence are incapable of growth, and as a result develop fixed mindsets (Dweck, 2006).

Learned Skills

When asked, “No matter how much intelligence you have, you can always change it a good deal,” the vast majority of students interviewed agreed, and agreed a lot, with two students agreeing a little. Only five students of thirty-four surveyed disagreed a little that intelligence could change a good deal. In addition, most students disagreed with the statement, “You can learn new things, but you cannot really change your basic level of intelligence”. However, 12 students did agree a little with the statement. In general, DHH students recognized that skills and intelligence grow over time. Most students were able to recognize that intelligence can change, and basic levels of intelligence are not fixed.

Additionally, a participant explained how praising students on process praise, or strategies used is paramount in order to achieve success. She described her students, “They’re good readers, not because they’re decoding words and knowing all the words, but when we engage in the strategy, which is in the air, in ASL, mostly off the page. Then I’m like, good reading, you just inferred!” Another teacher described how praising students on skills versus process is a disservice. He explained, “You’re almost kind of locking them into this box of that’s what you’re good at.” He went on to describe that

students might be skilled in other areas too, but in order for them to access those skills, they need to exert extra effort. Furthermore, a teacher described letting students know that what they *did* was smart, for example they were paying attention, or they wrote down notes. In most cases, educators of the DHH focused on process-praise and strategies utilized, versus person-praise. Consequently, students recognized that their efforts and approaches would lead to proficiency over time.

Innate Skills

Moreover, educator surveys indicated that students often make “fixed-mindset” statements such as, “I’m not good at math,” or “I’m not very athletic” (Figure 2). These statements highlight the effects of person-praise. While DHH students indicated that they do not perceive skills as innate, teachers of the DHH across the state have observed students stating they lack certain innate skills, possibly indicating they do not recognize these skills can grow with time, practice, effort, and patience.

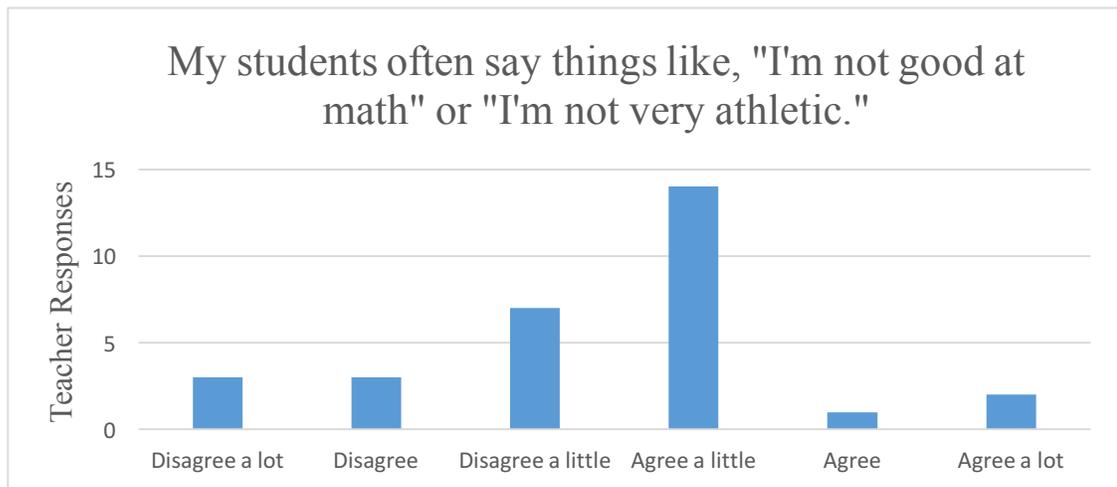


Figure 2

Furthermore, teachers interviewed occasionally referred to DHH student skills as innate. One teacher described conversations he has with students when they are

particularly skilled in an area. He explained, “I let them know that they're good. Like you know, you're so good at this!” Another teacher described, “I always believe that all of us have gifts, and we as adults are experts, and we need to try to figure out what [the students'] gifts are.” These perspectives of skills being innate may cause educators to provide person-praise, which research suggests establishes a fixed mindset (Kamins & Dweck, 1999; Pomerantz & Kempner, 2013).

Further iterating examples of DHH student fixed mindsets, one teacher explained that his students are unwilling to stretch their thinking and their habits. Another teacher stated, “They have learned these routines since the elementary level. It seems like a [rote] drill. They just go through the motions, which is very limiting.” This commentary was observed in classroom observations as well. For example, when one teacher was observed lecturing, the students seemed to fidget and remain unengaged. When the teacher had completed his lesson, and established small groups, nearly each of the groups expected the teacher to approach them and re-explain the criteria for their assignment. This was a typical observed phenomenon in the DHH classroom. Another teacher began his lecture, handed out an article to read, and approached nearly every child in the classroom to clarify once more what was expected. Unlike hearing students, DHH students must remain actively engaged, looking directly at the teacher at all times to input and process the information that is distributed.

While students seemed to agree that intelligence and skills are not innate, broadly 83% of teachers surveyed agreed to praising students on innate skills and/or intelligence. This indicated that teachers of the DHH do not recognize what Dweck (2007) identifies as the *Perils of Praise*. For example, when adolescents receive person-praise

highlighting perceived innate skills, or intelligence, they begin to identify abilities as stagnant and as a result develop a fixed mindset (Pomerantz, & Kempner, 2013). When asked about praising students for innate skills, one participant admitted that this type of praise was really easy to give, despite knowing that she should not. Another teacher suggested that she emphasizes effort, but she praises students on ability as well.

In addition, three out of four teachers interviewed either praised a child on being smart in their classroom observations, or stated they had done so within their interviews. For example, in one classroom observation a student answered the teacher's inquiry and his response was, "You read ahead; smart girl!" In another classroom, a child was complaining that his partner kept "stealing his ideas." The teacher agreed, and empathized with the student for having to put up with that stating, "You're so smart! I knew that was your idea!" Furthermore, a teacher described conferencing with a student over her writing. When the student turned in her final product, the teacher complimented her, "See, I knew you could do it! I knew you had the smarts." Despite teachers recognizing how harmful person-praise can be, this type of praise still finds its way into the DHH classroom.

Although teachers agreed to praising students for skills and intelligence, a central theme across interviews included teacher participants emphasizing the importance of harboring high expectations with DHH students. One teacher explained his students' skills being acquired through use of ASL. He stated, "they really pick up on ASL, and with ASL they're able to really take off in their understanding of abstract concepts." Deaf and hard of hearing students have more opportunity to thrive when they feel confident and secure in their use of ASL. Another teacher explained when speaking of a particular

student, that she thrives when she is communicating and elaborating in ASL. The teacher described the confidence the student exudes, and how much she has grown because she is understood in the language in which she is proficient. However, when teachers believe that skills are innate, it is possible that they lower their expectations. One teacher highlighted her students' feelings toward English, and their general avoidance. She outlined their struggles, and suggested student attitudes may be the product of years and years of low expectations for DHH students.

Overall, DHH students did not seem to believe that skills or intelligence were innate. Based on survey responses, DHH students generally agreed that intelligence and skills are not fixed, but can grow over time. Teachers interviewed also did not seem to agree that skills are inherent, however, classroom observations told a different story. For example, teachers were observed praising students' intelligence regardless of denying this was a form of praise they typically offered. In addition, teachers surveyed across the state agreed to praising students on innate skills and intelligence, which likely contributes to DHH students exhibiting fixed mindsets. It is especially critical for DHH students to recognize that skills are not innate, because DHH students frequently struggle academically. If DHH students perceive skills as innate, they may be more at risk than hearing adolescents for feeling discouraged. For example, over 70% of DHH students will drop out of college in comparison to 47% of students without disabilities (Bourgeois, Treubig, & Postsecondary Education Consortium, 2000). Therefore, DHH students should recognize that skills are learned with practice, and educators should avoid praising skills to foster a growth mindset in DHH students.

Challenges

It is widely understood that youth with growth mindsets will welcome a challenge, and perceive struggles as an opportunity for growth (Hochanadel & Finamore, 2015). In general teachers perceived student challenges are motivated by a lack of confidence, and negative mental models (Senge, 2006), which have likely developed over time. As DHH students typically struggle with literacy in comparison to their hearing peers, they often face more academic challenges tainting their overall outlook on how these challenges provide opportunity for growth. Teachers indicated throughout interviews that DHH students often lack confidence. Rather than utilizing resources, asking questions, and working harder, DHH students give up, shrug, act indifferent, or state they “do not know,” despite putting in little effort to learn and improve. This perception on challenges hinders DHH students in developing resilient growth mindsets, in which they recognize that challenging work leads to making relevant connections (Hochanadel & Finamore, 2015; Yeager & Dweck, 2012).

Confidence

Teachers interviewed spoke to lack of confidence as a major hindrance to students’ perception of challenges. For example, one teacher explained that many of her students are not “risk-takers”, because they lack the confidence to recognize that even if they get the answer wrong, they are going to learn from that mistake the next time around. She explained, “The more confident you are- you know you're going to try it. And it's okay because maybe you'll get it the next time. Or you're confident in the environment, that if you do make a mistake it's okay.” Another teacher described that students are “turned off” with reading and writing, because they are intimidated; he stated

“They feel dumb.” Students throughout classroom observations demonstrated a lack of confidence by shying away, avoiding eye contact, and refusing to participate. In one classroom, the teacher randomly selected students to answer his posed questions. When he selected a particular student, she immediately responded “I don’t know, I can’t read” without even attempting the prompt. When DHH students lack confidence, they are less apt to allow themselves to make mistakes, which could help them make academic gains in the future and promote a growth mindset.

Furthermore, all teachers interviewed indicated that English print was the most challenging area for their DHH students. Each teacher described how reading and writing English was overwhelming, and frustrating for their DHH students. One teacher explained, “It seems that when the students try to get back on board- they're just criticized again, and again, and again.” Another teacher described, “English class, they dislike the most because they don’t understand the words.” In one classroom observation the teacher asked a student in her senior year of high school to read an excerpt from the passage projected on the board. The student stood at the front of the room with a sheepish smile, and signed the passage to the teacher. However, her peer sitting directly across from her, and not in the teacher’s line of sight was feeding her sign for sign. This student made no actual attempt to read what was on the board, and instead relied on her friend to provide the answers. Deaf and hard of hearing students lack the confidence they need to tackle challenges head-on in order to develop growth mindsets. This lack of confidence may lead to negative mental models (Senge, 2006) about their own theories of intelligence.

Mental Models

Senge (2006) illustrates, “Our “mental models” determine not only how we make sense of the world, but how we take action” (p. 164). Deaf and hard of hearing students displayed negative mental models impeding their abilities to embrace a challenge and progress toward a growth mindset. One teacher explained, “[The students] are not always open to learning. They want to learn, but they don’t allow themselves to open their minds and change their habits.” During classroom observations, students demonstrated these negative mental models in the ways they referred to themselves, and sometimes one another. For example, in one observation a student called her peer “slow”, and another student stated during an activity, “this makes me feel retarded.” These students’ responses to each other and themselves are damaging, and may contribute to a lack of resiliency. Teachers spoke to these negative mental models as well. In one interview a participant explained how one of her DHH students would frequently come to class late, because he felt that he was perceived by his hearing peers as being “low,” when he walked into the DHH SDC. Another teacher stated that his students frequently call themselves “low-functioning.” These students do not have cognitive delays, but they harbor negative mental models, developed over time and without merit.

Mental models can be extremely difficult to break (Senge, 2006). One teacher explained, “They already have the mindset that they will fail. They think I’m not a smart student, I’m not like [the hearing students], I’m different”. This attitude contributes to students’ lack of confidence and fear of making mistakes. The same teacher described adolescents who are Deaf typically perceive their hard of hearing peers who speak

proficiently as being “smarter.” She explained, “It’s interesting, their attitudes about hearing people in general, or even hard of hearing students. Oh he can speak, he’s smart. That doesn’t mean they’re smart in school, just they have the ability to speak.” Deaf and hard of hearing students would benefit from understanding feeling challenged is not a reflection on their abilities, intelligence, or self-worth. In order for teachers to foster growth mindsets in DHH students, it is critical to break down the negative mental models DHH students harbor of themselves, and others who are Deaf.

Mistakes

With lack of confidence, and negative mental models, DHH students fear challenging tasks and making mistakes. For example, most DHH students surveyed disagreed a little that they like work they will learn from even if they make a lot of mistakes. The majority also stated that they like work best when they can do it perfectly without any mistakes. One student wrote on his or her survey above the disagree line: “[Don’t] learn,” and above the agree line: “good grades” (Figure 3). This student’s response was not counted, as they did not select only one answer, however it indicates that the child recognizes while perfect work leads to good grades, inevitably mistakes are the foundation of learning. In general, DHH students need to understand that when work is challenging, they will make more mistakes, but mistakes lead to improvement on future tasks.

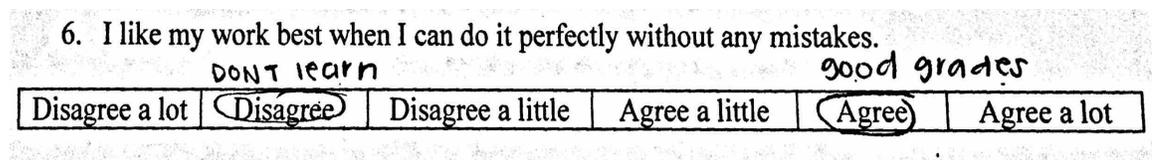


Figure 3

Student surveys generally indicated DHH students avoid challenging work in which they make mistakes. In addition, via classroom observations students seemed withdrawn and afraid to make mistakes, and in some cases indifferent toward making mistakes. One student was observed reading an article with his teacher, he finger-spelled each of the words slowly and methodically, which suggests that he did not know the sign for the words, and did not know what the finger-spelled words meant. Not one sentence into the article, he looked at the teacher, shrugged his shoulders, and said “I don’t get this”. He seemed overwhelmed and frustrated to the point that he no longer wanted to put in the effort. Another student was struggling to complete a task set forth by his teacher. He looked around the room, asked his tablemate, was unable to get a direct answer, and shrugged his shoulders proclaiming, “I don’t care,” placing his head on his desk for the remainder of the class period. Rather than clarifying with his teacher, or admitting he was unsure, the student decided to “give up,” which suggests a fixed mindset.

Teachers highlighted these behaviors as well. One teacher stated, “Students will act-out, and you ask them what's up? And it’s because they don't get it. So a lot of those negative behaviors stem from I don't understand what’s being asked of me.” Despite students’ negative attitudes toward making mistakes, teachers outlined the ways in which they establish opportunities for success in challenging situations. For example, one survey respondent stated,

We work hard together and face challenges as a team. We all stumble and fall in the process, but we always help each other back up and try again. They love

watching me make mistakes--- which I DO! I am human and I learn from my mistakes and they love watching me struggle just like them.

Teachers interviewed also spoke of providing scaffolds to ensure success. Each teacher described the ways in which they establish a classroom culture where students are free to make mistakes, and grow through the process. Most students are inevitably going to feel challenged academically, however it is the responsibility of the teacher of the DHH to ensure when students feel challenged they also have the confidence and positive mental models to succeed, learn, and grow from each challenge they are faced with.

Finally, half of the teachers surveyed disagreed that students would “give up” when they do not know the answer, versus the other half agreeing (Figure 4). However, most teacher surveys agreed that their students saw challenges as an opportunity for growth, and would usually try harder the next time around. This data is promising; in some classroom observations, DHH students made errors, but put forth the effort to try again regardless. For example, in one classroom observation a student consistently answered the teacher’s question incorrectly. Eventually, with peer and assistant support he was able to achieve the right answer and was never discouraged. In another classroom observation, a student told her peer to “think positive,” or be optimistic when she was unsure of herself. When DHH students consider challenges as opportunity for growth, they will be more apt to exhibit growth mindsets. However, in most circumstances, DHH students did not perceive challenges to align with growth, learning, and connections made over time.

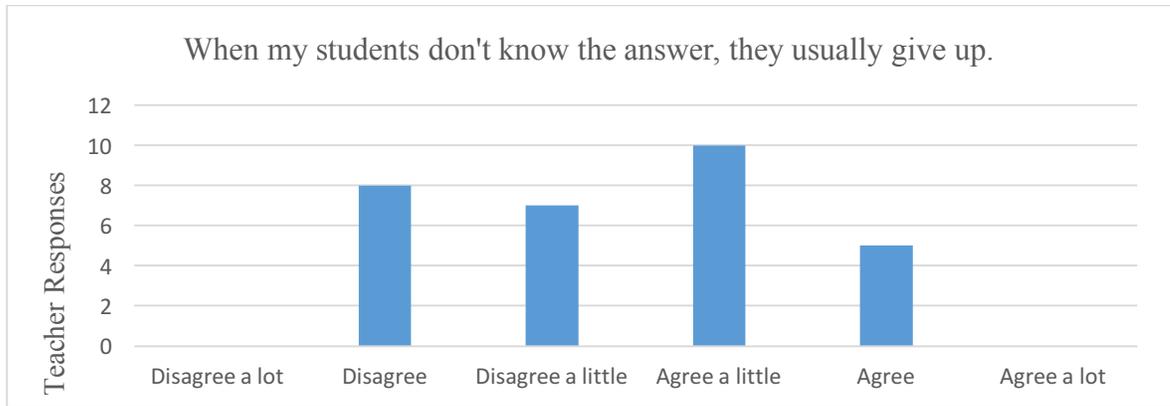


Figure 4

Ultimately, DHH students did not seem to perceive challenges as opportunities for growth. Despite educator attempts to provide scaffolds and built-in successes, DHH students often shut down and gave up when feeling challenged. Students may have negative perceptions on challenges due to lack of confidence and damaging mental models. This is especially troubling as DHH students most often do not have the outlet of communication with their parents at home. Educators of the DHH should be cognizant of language used in the DHH classroom, as far as how DHH students refer to themselves and others who are Deaf. Students who are DHH should learn that everyone experiences challenges, and these do not define the child, or equate to shortcomings. In order for DHH adolescents to develop growth mindsets, they need to develop confidence and risk-taking behaviors, as well as positive mental models about themselves and Deaf people in general. When students gain confidence, and have positive mental models, they will have more opportunities to learn from their mistakes.

Effort

In this study, DHH youth were regularly perceived to exert little effort, despite teacher attempts to praise and reinforce practice, perseverance, and strategies. As

research indicates, a child exhibiting a growth mindset will recognize the benefits of exerting effort and employing multiple strategies (Dweck, 2010). They will understand that effort is the key to success in all endeavors. However, a child who has a fixed mindset will perceive effort as arbitrary and pointless. They often feel that tasks requiring effort are a direct reflection on their inadequacy. Because DHH students were observed to generally perceive challenges in a negative light, there may be parallels as to why teachers also noted DHH students to exert little effort. Common themes across the board included a lack of motivation, a stigma toward effort and Deafness, and praising effort.

Motivation

Teachers interviewed agreed that DHH adolescents are perfectly capable of meeting grade level standards, including being literate in English, if they put forth the effort to achieve. One teacher spoke of the value in persistence. She explained, “In order to be able to read and write well, you have to keep doing it and even though it’s really hard and it’s something that’s not easy for various reasons that you keep trying it.” Another teacher explained, how everything takes practice. He talked about a student who struggles with his writing, but loves soccer. This teacher explained to the student that his favorite soccer players were not born being “awesome,” but rather they practiced every day in order to achieve their goals. While teachers of the DHH concur that effort, perseverance, and practice are crucial, they also have noticed a lack of motivation among a number of DHH students.

One teacher described her students’ lack of motivation as, “Students who typically get F grades expect it. They usually say ‘well I didn’t turn in my homework on time. I

didn't study for my test,' so they just expect their grades." Another teacher had a similar experience; he outlined how many of his students receive failing grades because they are not motivated to turn in their homework or put forth the necessary effort to learn and achieve. Despite this lack of motivation, teachers agreed that the ideal DHH child *wants* to learn. One teacher described a struggling student, "She knows she's not a great writer, but she still *wants* to learn, she still *wants* to be involved in class lessons, she *wants* to answer questions and respond, and she *likes* to participate." These motivation and desire to learn are key in order for the DHH child's success. Another teacher explained that the ideal DHH student recognizes that they do not learn like the rest of the world, they learn differently- and they need to figure out how. He explained ideally his students would recognize, "I'm Deaf and I'm going to have to go home and study. After I practice this enough, I'll get it- and there isn't much difference between [myself and hearing people]; I just have to do it differently." When DHH students begin to see the value in effort, they will be more equipped to tackle challenges through persistence and avoid feelings of discouragement.

To encourage students to continue putting forth effort and making progress, teachers described celebrating small wins and achievements. One teacher stated, "I encourage them by modifying the task in that moment, so that they feel successful, and then when you feel successful you want to keep going." Another teacher was observed showing students the progress they were making toward a class reward; the criteria for the reward directly related to student effort. Teacher survey respondents had similar approaches stating, "You're working hard. You didn't know that before, now you have learned it! Your brain is growing! Great job!" Another survey respondent described the types of

praise he or she gives DHH students, “Wow, good job! Nice try. I really like how you know this is hard, but you are working on it anyway.” Additionally, students surveyed mostly agreed that when something is hard, it makes them want to work more on it, not less. This suggests that DHH students recognize the value in effort. Furthermore, most students agreed that they like their work best when it makes them think hard further suggesting that students appreciate effort.

Stigma

Teachers suggested that in some cases, students might be less apt to put forth effort because of a perceived stigma that trying and caring should be avoided for social acceptance. One teacher explained typical student responses to receiving poor grades, “I think there is a stigma of the nerd, they want to avoid that; they want to look cool.” This same idea was observed in the three high school classroom settings, but less so in the middle school context. For example, while some students certainly participated and put forth effort to contribute, other perfectly capable students were aloof, withdrawn, unengaged, and passive. It is feasible that these students avoided effort in order to prevent looking too eager or motivated by their peers. Another teacher described his students’ perception on the social stigmas of effort as, “[The students] don’t want to be the teacher’s pet you know, because they get picked on more.” This was observed to be more of an issue in the upper grades than at the middle school level, however it is still an issue to be considered nonetheless. Finally, one teacher described how her students do not consider themselves to be bright or capable; she described her fears that her students avoid trying because of this perceived stigma. Deaf and hard of hearing students might feel as though meeting grade level standards is out of reach. If this is the case, they may

be discouraged in putting forth the effort with the notion that they are going to fail regardless. For example, 74% students surveyed agreed a little, agreed, and agreed a lot that they like work best that they can do really well without too much trouble (Figure 5). If DHH adolescents do not recognize how critical effort is, they will struggle to succeed and exhibit growth mindsets.

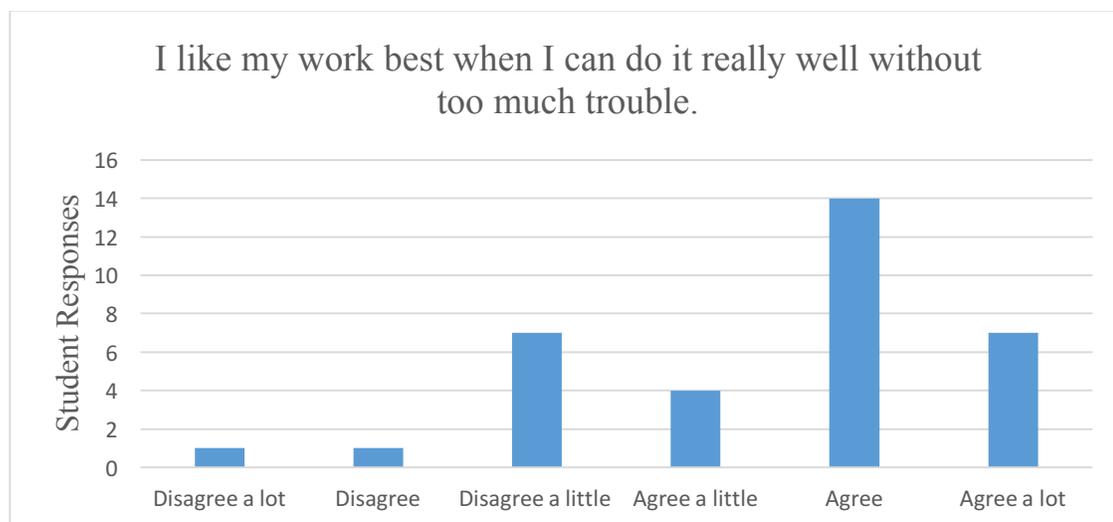


Figure 5

Furthermore, it is possible that parents also have correlated a stigma of low expectations with Deafness, which further exempts DHH students from putting forth effort. One teacher explained, “Even their parents think lesser of them because they are Deaf; they think they’re capable of less. One student just told me how frustrated he was that his mother doesn’t write to him in Standard English when she texts.” Another teacher had similar qualms, “I think parents need to teach their children, it doesn't matter if children are disabled or not, we need to teach them what their strengths are.” If parents of DHH students are unaware of how capable their children are, it is possible that their own negative stigmas regarding Deafness affect their child’s willingness to be vulnerable in putting forth effort.

Despite these perceived stigmas, DHH adolescents mostly disagreed that working hard made them feel not very smart. It is quite possible that due to DHH students being frequently challenged to meet rigorous academic standards, they “work hard” on a daily basis. Thus, some youth who are DHH recognize that even though they have to put forth extra effort, this does not reflect on their intelligence. One teacher described frequent conversations he has with his students, “Things don’t come as easy as they come to your sister in the first grade who can hear. She can read and write because she’s able to hear.” This teacher pointed out how critical these conversations are with his students in order for them to recognize that their struggles related to Deafness do not define them. He emphasized that putting in additional effort in comparison to hearing siblings was not only important, but completely necessary to succeed. Students who are DHH must avoid correlating effort with a lack of intelligence in order to exhibit a growth mindset.

Although DHH adolescents often correlate a stigma with effort, and frequently parents of DHH students stigmatize Deafness, educators highlighted ample ways in which they empower their students in recognizing the benefits of effort over time. At Western High School, DHH adolescents are empowered by creating an Individual Education Program (IEP) PowerPoint, outlining students’ personal strengths, needs, goal attainment from the prior year, and upcoming goals for the following year. By empowering students to assume their own education through highlighting progress, and discussing goals, it is possible that students are more invested, and in turn put forth more effort to attain their goals. Another teacher described using green ink/pen when correcting student work, so the students recognize that they are to learn from it, and “go’ with it.” He explained, “With reading and writing you have to persevere, that’s the

reason that I use the green- they learn from it; I try to empower the students, because they know it, they have it, they don't have cognitive issues." Teachers of the DHH often take a Deaf-centered approach (Humphries & Allen, 2008) in educating students so as to empower each child in feeling successful, and continuing progress toward their goals through effort.

Praising Effort

Throughout this study, teachers agreed that praising effort was critical in DHH student success. This was especially the case when students received poor grades, and felt inadequate or embarrassed. One teacher described, "I think the biggest impact is just letting them know that you appreciate the effort; it's not even about the grade. There's so much emphasis on the number you give, that can be disheartening if you're still getting bad grades." Teachers agreed with these attitudes; it is critical to remind DHH students how necessary putting forth effort is in attaining future goals. Another teacher stated, "I've explained to them that their grades are no reflection of their intelligence." As DHH youth often struggle in meeting grade level benchmarks and standards Deaf students may feel that their effort is arbitrary when the final product does not reflect their struggles.

One teacher was observed consistently praising effort in her classroom observation. She highlighted the students who were "trying their best," and complimented a student on a strategy she utilized to get the correct answer versus praising her intelligence or final product. Additionally, two teachers interviewed discussed the power of "yet," validating to students that they may not understand the concept, or have mastered the strategy *yet*. Meaning, there is still time, and effort to be exerted in order to achieve. A survey respondent also stated, "We praise the process and effort. I try to change "I don't know,"

to things like, "I don't know yet (but I will)!" This response indicated that several teachers recognize the need to praise effort, and ensure students know if they do not know the answer per se, they can and they will. Additionally, 97% teacher respondents agreed to praising students on strategies used, and effort, even when they get the answer wrong. In order for DHH youth to embody growth mindsets, they need to gain motivation and momentum, and break down stigmas of Deafness and effort.

Despite teacher best attempts to praise effort and ensure students recognize how invaluable trying is, it is possible that DHH students avoid exerting effort. Furthermore, there may be a connection between the way DHH students tackle challenges and their lack of effort. For example, it was noted that DHH students might fear challenges and avoid tasks that are difficult due to lack of confidence, and negative mental models. In order to master challenging work, one must put forth the necessary effort to succeed. Thus, it is possible that DHH students exert less effort in order to avoid a challenge. One teacher outlined how aware his students are, "I think they are aware of their challenges, but they choose not to face them because it's easier that way." When adolescents recognize the benefits of challenges and making mistakes, they will put forth more effort, which could contribute to a growth mindset. Students exhibiting a growth mindset will recognize how critically effort and practice leads to expertise. However, youth with fixed mindsets believe that effort correlates with failure, or not being up to par.

In this study, DHH adolescents were mostly observed, and perceived by teachers to exert less effort than necessary to achieve their goals. Deaf and hard of hearing students lacked the required motivation to exert effort and tackle challenging tasks. Furthermore, DHH students frequently viewed Deafness in a negative light, or stigmatized Deafness,

feeling less adequate about themselves and others who are DHH. Teachers also described parents' role in the perceived stigma of Deafness, which may be caused by an overwhelming disconnect with the Deaf community. In order for DHH adolescents to feel confident in exerting effort stigmas of Deafness held by parents of Deaf youth, and DHH students themselves must be substituted with high expectations and empowerment.

Feedback

In the present study, DHH students were observed visibly upset after receiving feedback, getting defensive, and often times overreacting. Furthermore, several DHH students indicated they feel “dumb” when they received feedback. Adolescents with growth mindsets will appreciate feedback, and take necessary steps toward improvement (Dweck, 2007). Moreover, adolescents with growth mindsets will implement feedback in order to progress. On the other hand, youth exhibiting fixed mindsets take feedback personally and become defensive. If DHH students do not recognize the benefits and necessity of feedback, they will struggle to make academic gains, and they will struggle to develop a growth mindset.

Defensiveness

Deaf and hard of hearing students in this study were observed becoming frustrated and defensive in receiving feedback. In one situation a student was reading a passage from the board, when she signed a few words incorrectly, her teacher provided support and feedback. The student's response to the feedback was, “That's what I said.” She repeatedly claimed that she said what the teacher was suggesting. This defensive response to feedback is indicative of a fixed mindset. The child in this case behaved as though she was embarrassed to receive the feedback, and as a result argued that she was

correct and not in need of feedback in the first place. In a second observation, a pair of students presented their ideas together. When the teacher provided feedback to the group, one of the students was visibly upset. He rolled his eyes, and scowled at the teacher. His reaction was so evident the teacher had to ask “If he was mad;” to which the student responded no and sat back down without contributing for the remainder of the class session. These responses to feedback are inappropriate, and not conducive to fostering a growth mindset. Furthermore, a child presenting her ideas in the same class was provided feedback after her presentation of ideas. She did a wonderful job presenting; she made a few errors and was given suggestion by her peers and the teacher. The student was so upset by the feedback, the teacher confided after the observation she approached him crying. This particular student explained that her partner was of no assistance, and she felt as though she had to carry out the brunt of the work by herself. The student’s inappropriate reaction to feedback was indicative of a fixed mindset.

An observable trend with these students reacting poorly to feedback was that these students seemed to be “top of their class.” One teacher explained, “[The students] live in a fishbowl, and they can only compare themselves with each other. This limits growth particularly for those students who are already at the top.” It is possible that DHH students who seem to thrive in comparison to their peers, are provided feedback less frequently and are thus personally offended by receiving feedback for this reason. Students who are DHH need to recognize that feedback provides opportunities for growth. Especially because DHH youth frequently struggle academically, it is invaluable for Deaf students to recognize that feedback is necessary, everyone receives it, and

feedback is no reflection on intelligence. When DHH students understand the necessity in feedback, they will progress toward exhibiting growth mindsets.

Providing students with corrective feedback is a necessary aspect of being an educator. In order to improve, teachers must inform students where they have made errors. In this study, students receiving corrective feedback seemed to believe this feedback indicated they were not intelligent. One teacher explained how his students will respond to receiving corrective feedback, “Sometimes the students will say, ‘I’m such an idiot; I’m so dumb.’” This teacher maintained that he always explains to students they are not dumb; the feedback does not define them. Students, however, indicated that corrective feedback was a direct reflection on their intelligence. Another teacher explained that she had done an activity with her students that required them to individually walk up to the board and write down a response. One of her students reached the board, but could not remember his answer. When he wrote the incorrect answer, the teacher guided him in the right direction providing corrective feedback. The student bopped himself in the head a few times after receiving the feedback. This response to feedback indicates this child exhibits a fixed mindset. Adolescents with a growth mindset will appreciate and learn, versus feeling inadequate when receiving feedback.

Furthermore, teachers mostly agreed a little that their students are usually embarrassed about getting poor scores, and may lie about their performance to peers (Figure 6). Teacher perceptions on student response to feedback and grades indicate that DHH students exhibit fixed mindsets. Students need to understand that corrective feedback, including a grade, is only meant to inform the child where they need to

improve. Throughout this study, DHH students seemed to feel personally offended with receiving corrective feedback, which was delivered directly and purposefully.

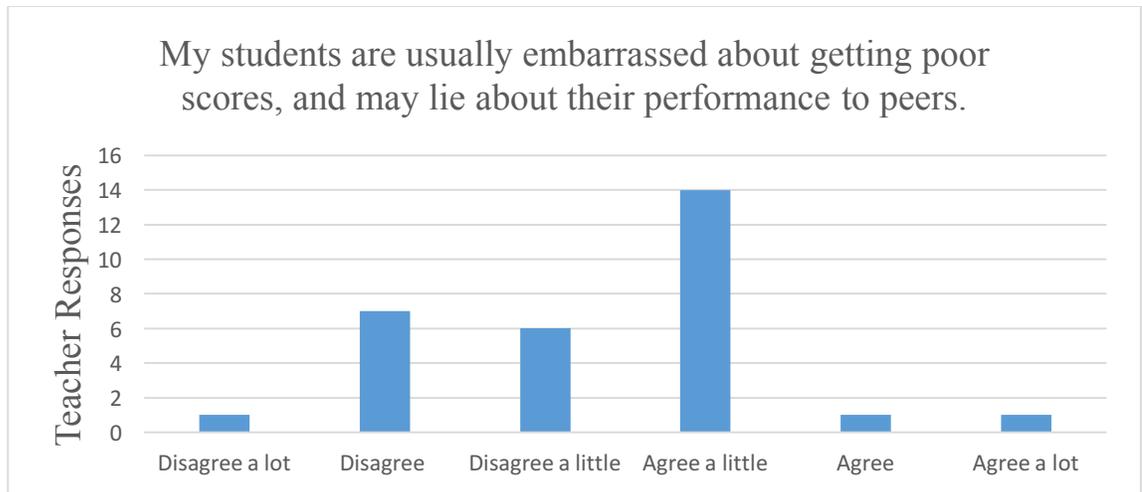


Figure 6

Process Praise

Although students seemed to take corrective feedback personally, teachers mostly provided process praise throughout classroom observations. Teachers praised students on strategies utilized, effort, and processes. One teacher discussed how she praises students when she sees they are critically thinking. She explained that students appreciate this type of praise because they feel as though they are contributing to the class as a whole. Another teacher frequently provided process praise to his students throughout classroom observations. Rather than arbitrarily suggesting students were smart or right- he praised thinking, and originality. Praising students on process versus ability is critical in forming growth mindsets, however, this praise must be consistent, and over time. Furthermore, teachers surveyed often provided process praise such as, “I support effort and self-advocacy I support their personal best and their own areas of strength.” Another survey respondent stated he or she offers process-praise such as, “1) Good reasoning! 2) You're

on the right track! 3) That was a thoughtful answer! 4) You tried hard! 5) Great job working on that independently! 6) You're high school ready!” Teachers in this study mostly recognized the necessity to praise students on processes, and students reacted favorably to this praise. However, it still was evident that corrective feedback caused defensiveness in several students, which is not indicative of a growth mindset.

Deaf and hard of hearing adolescents in this study, seemed to become defensive and take feedback personally in the classroom. These reactions to feedback pointed to intelligence theories of a fixed mindset. Furthermore, DHH adolescents were especially offended when receiving corrective feedback. Youth receiving corrective feedback admitted to teachers that they felt dumb when they got the answer wrong. For example, teachers of the DHH mostly agreed a little that students were typically embarrassed of poor grades, and may lie to peers. It is likely that DHH students are keenly aware of their reading levels, which may cause further discouragement when receiving feedback. For example, DHH students participating in their IEPs are annually reminded that they are reading at the primer, first, second, and so forth grade levels. Deaf and hard of hearing students may feel more distraught than their hearing counterparts in receiving feedback, because they generally are aware that they are not performing comparably to their respective grade levels. Students with a growth mindset will not let grades and feedback define them. Students who are DHH should understand that corrective feedback is not personal, and is not meant to be discouraging. When DHH students can recognize that corrective feedback will help them achieve success, they will begin to harbor the tools necessary to develop growth mindsets.

Setbacks

Teachers of the DHH observed students respond to setbacks appropriately and with resilience, as well as inappropriately placing blame or feeling insecure. Furthermore, educators of the DHH described how critical having Deaf role models is in order for DHH adolescents to have the tools necessary to face setbacks. Youth with growth mindsets will experience a setback, and respond with resilience (Dweck, 2006). When youth exhibit growth mindsets, they recognize that the appropriate response to a setback is to try harder the next time around. However, adolescents with fixed mindsets do not take responsibility for their setbacks and downfalls. Fixed mindset individuals will accuse others for their faults, or become discouraged by a setback.

Resilience

Teachers in this study outlined multiple ways in which DHH youth exhibited resiliency after facing a setback. Setbacks were considered in two contexts, academics and personal setbacks, which impacted students. For example, one teacher spoke of a child whose mother was incarcerated. She explained that this child demonstrated resiliency despite the setback,

She was removed from her home; it was an abusive incident that happened, and just to see her come to school with a smile on her face, and hold it together, and talk to people when she was upset about it, but also have good moments, and pay attention in class, and continue to maintain her friendships, and come and give me hugs once in a while; [it] was just a very resilient thing.

Teachers surveyed also agreed that students demonstrate resiliency when faced with a challenge. One survey respondent detailed, “I had a student explain about his

hearing loss to another student. He told them why he wore his hearing aids and was proud of himself.” Other testimonies of observing DHH students display resiliency were paralleled. For example, another surveyed teacher described, “Several of the high school students kept smiling; no one understood how hard they were working to understand conversations during break, or during lectures, or gave them credit for working harder.” Yet another survey respondent shared,

I had a student who was teased and called a robot because of her hearing aids.

When she had to do a report on an issue that was important to her, she completed her presentation on Deaf awareness. She took an unfortunate situation, saw it for what it was - ignorance- and did something positive about it.

Throughout teacher interviews, participants described accounts of students displaying resiliency as well. For example, one teacher described a high school student’s struggles, “He was 15 and asked a teacher how to wash clothes. So she had to teach that student how to measure the detergent and so forth; we asked the student why, he said ‘Oh my father left.’” According to teachers of the DHH, students are frequently faced with setbacks whether academic, personal, or Deaf-related, often responding in a resilient fashion.

Educators mostly agreed that resilience is defined as overcoming hardship. One teacher explained, “Resiliency is never giving up, no matter how hard something might be.” Another teacher agreed that resiliency is defined as, “Always getting back up no matter how many times you fall.” When educators were asked about students displaying resiliency, they spoke both to damaging family situations that DHH adolescents were able to persevere through, along with resiliency in the context of the classroom. One

teacher described a struggling student who did not have many friends, and lacked confidence in the beginning of her freshman year in high school. The teacher discussed building a trusting relationship with this student over the course of the year. The teacher was able to communicate to the student that her setbacks were not flaws, and she could persevere. Developing this resiliency has changed her demeanor, confidence, and outlook on academics and herself according to her teacher.

Insecurities

In other cases, teachers described student responses to setbacks as becoming insecure or feeling discouraged. One teacher described a student reading at the pre-primer level, this child struggled and experienced setback after setback with his reading. The student finally proclaimed, “I can’t read!” The teacher worked with the child, and helped him to recognize his successes, but he still felt the setback was a defeat. Another teacher explained, “My students are damaged, and I’m trying to unwrap their pain; their feelings of low self-esteem.” Teachers also described that students often cry or become upset when faced with a setback. Furthermore, a common response from DHH students was feeling unsure of themselves. Teachers outlined how frequently students would survey the classroom, or require cues from the teacher before feeling secure enough to contribute to the class. This same idea was observed in most DHH classrooms as well. For example, in one situation two students were reading a short passage in unison in front of their class. One of the students took the lead and signed the passage; her partner waited for her to sign each word before he would contribute. He seemed insecure or nervous to make a mistake. In other classroom, students were presenting ideas related to the lecture. Students would begin to share and quickly confirm with the teacher whether

they were on the right track rather than displaying confidence in their demeanors. These insecure responses, and lack of resiliency, are indicative of a fixed mindset.

While student insecurities about setbacks imply a fixed mindset, teachers surveyed mostly agreed and agreed a little that their students like working hard, and learning from their setbacks (Figure 7). However, ten teachers did disagree with the statement. While some teachers perceive their students as hard-working and able to overcome a setback, in general students did not display resiliency as far as facing setbacks in the classroom, or teacher accounts of student responses to academic setbacks. Students frequently seemed insecure, and lacked the resiliency necessary to recognize that setbacks are just reminders to try harder the next time around.

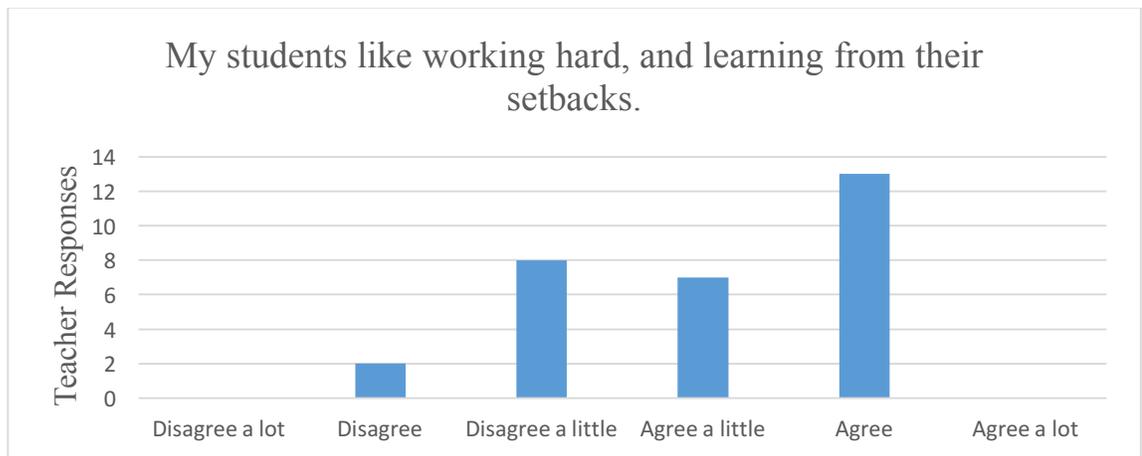


Figure 7

Deaf Role Models

Educators of the DHH detailed some of the best ways to face setbacks are for DHH students to have positive Deaf role models. One teacher explained how a student turned in an essay that she was rightfully proud of. When the teacher provided feedback, and the student felt discouraged, the teacher- Deaf herself- explained her own experiences that were comparable to her students. When the child recognized that she

was not alone, and this setback was only meant for her to learn and grow from, she felt camaraderie with the teacher and persisted. Another teacher detailed how critical Deaf role models are for adolescents who are DHH explaining, students need to seek out, “Who can I talk to who's been through this struggle, who understands all the barriers that I have as a Deaf person?” Furthermore, teachers of the DHH generally agreed that having successful Deaf role models in a DHH student’s life was one of the most critical component of having the tools necessary to face a setback with resilience.

Resiliently responding to setbacks further contributes to growth mindsets and assists the student in long term successes. Deaf and hard of hearing students may face more setbacks than their hearing counterparts. For example, DHH students frequently lack access to language at home. Due to this absence of communication, students who are DHH often struggle in school. Furthermore, Wolbers (2002) illustrates, “The achievement of minority Deaf students may reflect the many disadvantages they experience in their home environments such as poverty, single parent families, limited English proficiency, and less overall exposure to language” (p. 46). Thus, establishing relationships with DHH students and Deaf role models is fundamental in DHH student success and resilient response to setbacks.

Furthermore, as DHH adolescents frequently lack access to communication at home, teachers of Deaf serve a critical role in mentoring DHH students, and ensuring this youth recognize their value and contributions. As one Deaf participant described, “I knew I wanted to be a teacher since I was little, because of the teachers I had in the past. They really believed in me; they really helped me to grow as a person.” While this teacher was speaking of her own experience as a Deaf child, sentiments are paralleled

with other DHH educators standing in the role of “mentor.” For example, another participant explained how critical a trusting, and honest relationship is with his DHH students. Yet another participant illustrated how he greets his students individually, and values their desires to communicate in ASL. He stated, “I definitely start [classroom sessions] with interactions with the students, I try to have some sort of really personal interaction with them as far as how’d your day go? And I try to really listen to them.” Educators of the DHH recognize that their roles as teachers stretch beyond the walls of the classrooms. As DHH students frequently are unable to communicate fluidly with their parents, it is critical for educators to build rapport and trust with students, so students can recognize the potential their educators see in them.

Deaf and hard of hearing students in this study were observed responding to setbacks both resiliently, and not. For example, several teachers outlined how resilient their DHH students truly are in their abilities to persevere through their daily struggles of being Deaf. Those struggles were related to communication barriers, ignorance of Deafness, academic struggles, and attention brought from amplification. Students overcoming adversity, and displaying resiliency, are certainly indicative of exhibiting growth mindsets. However, DHH adolescents also responded to setbacks with insecurity, and a lack of resiliency. These responses contribute more to a fixed mindset.

Conclusion

Overall, DHH students in this study mostly exhibited fixed mindsets, with a hint of growth according to teacher perceptions of student responses to skills, challenges, effort, feedback, and setbacks. It is especially critical for exceptional students, such as those who are DHH, to embody growth mindsets. Adolescents participating in this study

often harbored negative mental models about DHH people, including themselves. Deaf and hard of hearing students ridiculed each other, and labeled themselves as “low functioning” or “retarded.” Additionally, DHH students and their families, often times stigmatized Deafness. Parents of DHH adolescents may falsely perceive their child as incapable, or inadequate in comparison to hearing youth. Deaf and hard of hearing students also exhibited insecure behaviors in the DHH classroom setting. Adolescents avoided challenging tasks and effort, and they shut down when experiencing corrective feedback, or a setback. Youth who are DHH are especially prone to academic struggles, thus fostering growth mindsets in these students should be considered.

While DHH students indicated in survey responses that they do not believe skills to be fixed, teachers suggested that students frequently commented that they are not particularly skilled in an area, which says otherwise. Furthermore, surveyed teachers of the Deaf widely agreed to praising students for intelligence or innate ability. When educators highlight smarts or affinities, students may begin to feel discouraged when they are inevitably challenged. Teachers perceptions of students’ responses to skills indicate that in general DHH adolescents lean toward the fixed mindset end of the spectrum. Additionally, educators of the DHH typically perceived their students to not handle challenges appropriately. For example, youth who are DHH in general lacked the confidence necessary in order to face challenging tasks. For example, DHH students avoided making mistakes and preferred their work to be done perfectly without any mistakes at all. Moreover, DHH youth often harbored damaging mental models about themselves and others. These negative mental models may inhibit their abilities to attain growth mindsets and resilience.

With DHH students' apprehensiveness toward tackling challenging work, an overall lack of effort was observed. Adolescents' display of a lack of effort, is indicative of a fixed mindset. Deaf and hard of hearing students were perceived throughout this study to lack the necessary motivation in order to put forth effort in completing challenging tasks, which inhibits their overall success and progress in the curriculum. Although DHH youth suggested that they appreciate working hard when a task is difficult, educators perceived DHH students as not motivated. This lack of motivation may be due to student-perceived stigmas of effort, and parent-perceived stigmas of Deafness. These stigmas, and lack of motivation imply DHH adolescents generally exhibit fixed mindsets.

Furthermore, students in this study did not respond favorably to corrective feedback. For example, students were observed taking feedback personally and becoming agitated, defensive, and upset. When students react to feedback in this way, tentatively students do not recognize the benefits and necessity of feedback. When students are unaware of how critically necessary feedback is in order to improve, they are more likely to exhibit a fixed mindset. Finally, teachers outlined the many ways in which students demonstrated resiliency when faced with a setback. Students displayed resiliency by overcoming challenging tasks, embracing their Deafness, and trekking forward despite unfortunate circumstances in their home lives. These resilient attitudes may highlight a growth mindset in a handful of adolescents who are DHH. Some teachers suggested, however, that students were frequently insecure or uncomfortable when faced with a setback. Students would require peer and teacher approval before feeling confident enough to move forward, which implies a fixed mindset.

In general, via the conceptual framework of skills, challenges, effort, feedback, and setbacks, youth who are DHH were perceived by their educators to not exhibit growth mindsets. In some cases, students were observed displaying resiliency, putting forth effort despite experiencing challenges, overcoming setbacks, and working toward developing skills. However, in most circumstances educators of the DHH observed their students withdrawn, defeated, and afraid to show vulnerability. These characteristics are directly associated with a fixed mindset.

CHAPTER 5: Conclusions and Recommendations

Introduction

Through the lens of Deaf adolescents' responses to skills, challenges, effort, feedback, and setbacks (Dweck, 2006), Deaf youth mostly exhibited fixed mindsets- with a hint of growth. In this study, a small group of DHH students recognized that skills are malleable, challenges are to be embraced, effort is imperative for growth, feedback is helpful, and setbacks can be overcome. These adolescents embodied growth mindsets, however, in most circumstances educators of the DHH perceived their students to believe skills are innate, challenges should be avoided, effort is arbitrary, feedback is an attack, and setbacks are devastating. When DHH youth perceive skills, challenges, effort, feedback, and setbacks in this way, they are more likely to exhibit fixed mindsets.

Summary of the Study

This study primarily focused on the types of mindsets DHH students exhibit; growth or fixed. It is imperative to research the types of mindsets that DHH adolescents embody, as this population of students are a marginalized group, frequently faced with academic setbacks. In the vast majority of circumstances, DHH children are born to hearing parents, who are unfamiliar with the Deaf community. Thus, DHH youth frequently begin acquisition of their first languages far later than their hearing peers. These language delays are a likely factor in DHH students' overall low academic performance. Students with growth mindsets are resilient in the face of setbacks. As DHH adolescents are so frequently faced with academic setbacks, it is critical for educators to foster growth mindsets in their students.

In conducting this study, data was collected via four classroom observations at three school sites, four interviews with teachers of the DHH, a student survey distributed to DHH students ages 13-18, and an educator survey distributed to teachers of the Deaf across the state. A classroom observation protocol, and teacher interview protocol were created to align with the conceptual framework. The conceptual framework was used to filter data in order to surmise the types of mindsets, or intelligence theories, that adolescents who are DHH exhibit. This conceptual framework focused on student perceptions of skills, challenges, effort, feedback, and setbacks.

Research Questions

The research questions driving this study include: In what ways do Deaf students exhibit growth or fixed mindsets?

Sub-questions

- 1) What are teacher descriptions of how students perceive overall skills and challenges?
- 2) In what ways do DHH students exhibit effort?
- 3) What are teacher perceptions on DHH student responses to praise and feedback?
- 4) How do DHH educators define resiliency?

Results from this study indicated that DHH adolescents mostly exhibit fixed mindsets, with a small number of youth displaying growth mindsets. While students in this study mostly indicated that they believed skills can be learned and honed over time, teacher descriptions of student perceptions of skills differed. For example, teachers surveyed noted their students would make comments along the lines of not possessing a

certain skill or affinity. This indicates that DHH adolescents do not recognize skills are acquired with practice. Furthermore, teachers of the DHH almost unanimously praised students for intelligence and innate skills, which can further shape a fixed mindset.

Also, students who are DHH may be more avoidant of challenges when they perceive skills as innate. Students in this study typically avoided a challenge, because they felt inadequate. Furthermore, DHH youth frequently lacked the confidence necessary in facing a challenge, and as a result harbored negative mental models about DHH people. These attitudes can be especially damaging for students who are Deaf. In many circumstances, DHH youth in this study were observed “giving up,” rather than taking a risk that may have highlighted their lack of understanding.

This domino effect continued as DHH students avoided a challenge, and thus were perceived by teachers of the DHH as avoiding effort as well. Teachers in this study highlighted possible student-perceived stigmas, as well as parent-perceived stigmas of Deafness. The way DHH adolescents and their parents view Deafness, in a negative light as in disability, versus as a positive cultural minority, may impact how much effort youth who are DHH are willing to put forth. Additionally, according to teacher accounts and via classroom observations DHH students receiving corrective feedback were frequently defensive. When feedback was designed to help the child learn and growth from their mistakes, it was often taken personally, and students suggested that this type of feedback made them feel poorly about themselves or their performance. These responses to feedback hinder development of positive growth mindsets.

Finally, educators surveyed and interviewed defined resiliency quite consistently. Teacher participants defined resiliency as *persevering after a setback*.

Furthermore, teachers of the DHH outlined a number of situations in which their Deaf students displayed resiliency after facing setbacks. However, students were also observed feeling defeated after setbacks. Essentially, DHH students in this study were mostly perceived by their educators as exhibiting fixed mindsets. Their responses to skills, challenges, effort, feedback, and setbacks suggested that generally, they employ fixed mindsets.

Discussion

Because DHH students are most often born to parents who do not communicate effectively in ASL, teachers bear a huge responsibility in promoting a resilient growth mindset. Deaf and hard of hearing students will fare better in college and careers when they recognize that skills and intelligence grow over time, and with effort. Additionally, DHH students should recognize that undertaking challenges equate to learning and improving. When adolescents who are DHH perceive skills as malleable, challenges to be embraced, effort as necessary, feedback as a tool for growth, and tackle setbacks with resilience they will be more apt to exhibit growth mindsets. These growth mindsets may serve them well in pursuing higher education, and lucrative careers.

Developing mindsets, or theories of intelligence, will not happen in a small time frame or setting. Developing mindsets takes time, and a paradigm shift; recognizing that best intentions to praise students are not necessarily the most conducive to developing confidence or resiliency. Educators of the DHH should consider implementing strategies in classrooms to ensure that students have opportunity to develop and exhibit growth mindsets. In order for this to happen, educators of the DHH may begin by looking at student perceptions of skills, challenges, effort, feedback, and setbacks.

When educators of the DHH focus on process-praise and strategies utilized, versus person-praise, students may begin to recognize that their efforts and approaches will lead to proficiency over time. Furthermore, educators should be cognizant of how damaging person-praise on innate skills and intelligence can be, as this type of praise may contribute to a fixed mindset. In this study, teachers surveyed and interviewed admitted to praising students on intelligence and innate abilities. This type of praise is not conducive to a growth mindset, and educators of the DHH inadvertently may harm students with this type of praise. With educators of the DHH praising students on innate skills and abilities, this implies that teachers are unaware that praising innate skills and intelligence could shape a fixed mindset. Growth and fixed mindsets are not fostered by one teacher, in one year- rather there has to be consistency in the field of Deaf education promoting growth mindsets, in order for students to reap the benefits.

Furthermore, adolescents who are DHH for the most part, did not perceive challenges as opportunity for growth. This may be a result of students receiving person-praise rather than process-praise. For example, DHH youth may have falsely learned through receiving person-praise that they are either skilled in an area or not, thus when faced with a challenge, they may be less apt to face it head on believing that they are going to fail regardless. Deaf and hard of hearing students in this study often times lacked the confidence needed to tackle challenging tasks in which mistakes were inevitable. When students are consistently praised for innate abilities, they feel defeated when they are faced with a challenge. Students with fixed mindsets will let challenges define them. Additionally, students who are DHH may have mental models that DHH people cannot be successful, further hindering them from facing challenges through

determination. Deaf and hard of hearing student participants frequently spoke poorly of themselves and peers who are Deaf. Furthermore, parents of DHH students may also feel their children are less capable, allowing them to avoid challenges.

Along with avoiding challenges, DHH students were observed to exert little effort on most occasions. Based on teacher perceptions and accounts, DHH students believe that effort is a direct reflection on their inabilities. Adolescents in this study frequently gave up, rather putting forth effort necessary to achieve. For example, students in this study were perceived as lacking the necessary motivation to put forth adequate effort. In addition, students suggested they prefer completing work that they can do without too much trouble. Again, this may be a result of receiving person-praise. Deaf and hard of hearing youth may have learned that they are good at something, or they are not. Thus, when challenges present themselves, requiring effort, the DHH child may be less apt to try, believing that they are not capable. Also, when DHH students received feedback, they were especially offended. These responses to feedback are not indicative of a growth mindset. Students with growth mindsets are aware that feedback is helpful, and does not reflect on their abilities. Youth with fixed mindsets become defensive to feedback, and they feel being corrected defines who they are as people. Deaf and hard of hearing adolescents in this study were especially defensive when receiving corrective feedback. They suggested that they did not make the mistake in the first place, or they were visibly angry or upset. These reactions to feedback may have manifested over time, and mostly contribute to harboring fixed mindsets.

DHH youth in this study were perceived responding to setbacks both resiliently and not. For example, teachers highlighted situations in which students were targeted for

wearing amplification, and the students were able to explain to their peers the necessity of their devices. However, in other circumstances teachers perceived students to break-down when faced with a setback. Deaf and hard of hearing adolescents were frequently viewed as being insecure about their academic performance, and having low self-esteem, especially after being faced with a setback. These students were less apt to respond to setbacks resiliently, indicating a fixed mindset.

Essentially, some adolescents in this study displayed characteristics of a growth mindset, however, most exhibited a fixed mindset. In some circumstances, responses to skills, challenges, effort, feedback, and setbacks were typical of any child. For example, in general DHH adolescents do not necessarily perceive skills as innate, challenges to be avoided, effort as arbitrary, feedback as an attack, or setbacks as detrimental. However, DHH students have unique challenges are barriers that may affect their overall perceptions of skills, challenges, effort feedback, and setbacks, which indicated the mindsets they display. In general, DHH adolescents struggle to read and write English, therefore, they might consider their hearing counterparts, parents, or siblings, skilled when they have an unfair advantage to accessing print. With these struggles to read and write English, DHH youth typically are challenged in meeting grade-level content standards. Thus, their relationship with challenges is likely more damaging than the general perceptions of their hearing peers. Additionally, DHH students must put forth more effort than their hearing counterparts in order to succeed. Deaf and hard of hearing students may perceive effort in a negative light. With these detrimental relationships with skills, challenges, and effort, DHH adolescents are more prone to being defensive in receiving feedback. Therefore, handling a setback with resilience and grit becomes

difficult when the relationship with skills, challenges, effort, and feedback are so undesirable.

Certainly in any population of adolescents, some students will exhibit growth and some will exhibit fixed mindsets. There are layers of nurture and nature that ultimately play into whether or not youth exhibit characteristics of growth or fixed mindsets. However, DHH students have additional barriers that are fairly unique. These barriers may contribute to why DHH youth were generally perceived as displaying fixed mindsets.

Limitations

This study was carefully constructed to examine the types of mindsets DHH students embody through the lens of skills, challenges, effort, feedback, and setbacks. However, limitations should be considered before transferability or generalizations of the findings are made. First of all, despite great effort placed into avoiding the researcher effect, as an educator at Miller school for the Deaf, biases may have surfaced altering data analysis. Next, the sample size was small and site demographics may not be representative of a larger body of DHH students. Furthermore, a lack of prior research studies on DHH student mindsets posed a limitation, as this study was founded on literature from related studies, but not specific to adolescents who are DHH. In addition, students surveyed were given printed surveys, as well as the opportunity to view the survey in ASL. Teachers were asked to avoid assisting or clarifying information to students, however, whether this happened or not is impossible to account for. Finally, this research was conducted in a restricted time frame and may lack longitudinal effects, which could have provided richer data over time. Despite limitations, this study may

offer information to educators of the DHH on the types of mindsets, or theories of intelligence, that DHH youth most often exhibit.

Implications for Policy and Practice

In order for DHH students to embody a growth mindset, it is critical for them to recognize that skills can be learned, challenges lead to growth, effort is critical, feedback is beneficial, and setbacks are not only inevitable, but can be overcome. Moreover, educators of the DHH harbor a great role in shaping DHH student mindsets, and should be aware of growth and fixed mindsets as well. If teachers of the DHH recognized that skills are not innate, they would not praise students on their abilities or intelligence. It may be in DHH students' best interest for educators of the DHH to have professional development on theories of intelligence. Educators of the DHH should learn that the word "smart" is not taboo; what is important is suggesting something a child *did* was smart versus person-praise suggesting they *are* smart. For example, teachers of the DHH should consider providing frequent praise on strategies employed in order to meet a goal. When students receive this type of praise they are more apt to exhibit growth mindsets.

Furthermore, teachers of the DHH should consider fostering learning environments that embrace a challenge. Challenges include harboring high expectations for students, despite inevitable struggles. However, if students recognize how necessary the struggle is they will likely be more apt to put in the required effort. Students who understand that challenges are necessary in order to learn, will begin to gain the confidence required in order to face a challenge. Students in this study were observed shying away from challenging tasks, however, they did not seem recognize that most youth are academically faced with challenges in some form or another. Also, adolescents

who are DHH avoided making mistakes. Educators of the DHH must consider celebrating mistakes as opportunities for learning in order for DHH students to internalize the value. If DHH youth understood that mistakes are not the be-all end-all, they will be less intimidated in making errors, which lead to learning and understanding. Last, DHH students in this study harbored negative mental models about Deaf people, believing them to be “slow,” or “low functioning.” These negative mental models impede the way that DHH students perceive challenges. It is possible that DHH youth place blame on their Deafness for not meeting academic standards, or for receiving poor grades. When DHH adolescents feel challenged, it is be critical for educators to highlight the many contributions that Deaf people have made to society. Deaf and hard of hearing students need explicit instruction related to their linguistic and cultural minority group in order to value the influence of Deaf individuals throughout history.

Additionally, effort should be quantified and emphasized regularly. Students who are DHH need to understand that putting forth effort, and working hard to succeed are essential in order to reach their goals. Students in this study frequently “gave up,” when their task seemed too big or overwhelming. Teachers of the DHH should consider ways to measure effort more precisely, so as to continue reinforcing how critical and necessary effort truly is. This is especially the case for the DHH learner, who generally struggles with English print. When DHH students recognize that practice, perseverance, and effort will contribute to their overall successes, they will likely be more apt to try. Moreover, educators must consider having candid conversations with parents of the DHH about the potential of their children. Educators in this study indicated that parents frequently stigmatize Deafness, believing that their child is incapable or less apt to succeed.

Arguably, it is the role of the educator to openly and honestly explain to parents that their child is capable of doing anything, with the exception of hearing. When parents and DHH adolescents recognize their potential, they will harbor higher expectations, which could lead to putting forth greater effort.

Teachers should also consider dialoguing with students about the benefits of feedback. Students were observed taking feedback personally and becoming defensive. Deaf and hard of hearing students should recognize that receiving feedback is imperative for growth, and feedback has no reflection on their intelligence. Deaf and hard of hearing students will fare better when they recognize how critical feedback is in order to learn from mistakes. Especially because DHH students so frequently struggle to meet grade level standards, ensuring educators are aware of intelligence theories is an essential component of DHH student success.

Finally, educators of the DHH should establish classroom cultures that foster resilience in DHH students, and their responses to setbacks. One way educators may achieve this, is through introducing DHH students to Deaf role models. Adolescents who are DHH are especially prone to academic setbacks, thus if they were able to meet and interact with Deaf adults who experienced the same struggles, they would be more equipped to handle setbacks resiliently. When students have the tools to handle setbacks with resilience, they will embody one of the most critical pieces in exhibiting a growth mindset.

Recommendations

This study pioneers research on DHH student theories of intelligence. Findings from this study indicate that in general, DHH students exhibit fixed mindsets, which may

impede their academic growth. In order to best serve the DHH population and ensure that teachers are fostering growth mindset theories of intelligence, teachers should first be trained. Professional development in the field of Deaf education that highlights research on growth versus fixed mindsets is necessary considering most teacher participants in this study stated that they praise students on skills and innate abilities. Because teachers of the DHH play such a critical role in DHH student learning, teachers need to first understand intelligence theories. Educators of the DHH should avoid delivering person-praise. While this person-praise may be beneficial, or confidence building in the short term, in the long haul it may cause adolescents to have negative perceptions of themselves and on their theories of intelligence. For example, DHH youth may eventually feel inadequate when they are faced with a setback, and no longer receive person-praise. Therefore, educators of the DHH may consider avoiding person-praise which may foster a fixed mindset.

Furthermore, students who are DHH often times feel intimidated when working toward a task they do not consider themselves proficient in. Thus, teachers of the DHH should consider emphasizing that skills are not innate; skills are learned and will improve with effort and practice. When DHH students recognize this, they may be more willing to change their habits in order to achieve success. Educators of the DHH should foster growth mindsets by avoiding person-praise, but rather focus mainly on process praise so as to emphasize to DHH youth that skills and intelligence are not innate.

Critically, teachers fostering a growth mindset in DHH students, should break down the negative mental models that many DHH students harbor of themselves, and others who are Deaf. Teachers of the DHH should also discuss stigmas of Deafness with

parents and youth who are DHH. For example, educators of the DHH are considered experts in the field, thus they may bear the responsibility of clearly defining Deafness to families, as well as the potential of DHH adolescents. Additionally, educators of the DHH should consider teaching students to value feedback. When students value feedback, as opposed to feeling defensive, they will be able to learn and grow. Finally, educators of the DHH should foster student resiliency in the face of setbacks in order to develop a growth mindset.

Future Research

Finally, to better understand DHH student theories of intelligence, a longitudinal study should be conducted. Researchers should investigate how educators can foster growth mindsets in DHH students. Additionally, specific characteristics of DHH students who embodied growth mindsets should be examined. Furthermore, researchers should investigate how promoting growth mindsets in DHH students may benefit them in the perseverance, as well as successes in college and careers. Additionally, future research may investigate the role parents have in shaping DHH student mindsets, or theories of intelligence. Due to a dearth of research in the field of Deaf education, it would be beneficial to consider further investigating DHH student mindsets, and the impact of fostering a growth mindset in DHH adolescents on student outcomes.

Conclusion

Ultimately, a small number of DHH students throughout this study were perceived as exhibiting growth mindsets, however most seemed to display fixed mindsets. Via classroom observations, teacher interviews, along with student and teacher surveys, it was evident that in most cases student responses to skills, challenges, effort,

feedback, and setbacks indicated a fixed mindset. Especially because DHH students so frequently struggle to meet grade level standards, ensuring educators are aware of intelligence theories may be an essential component of DHH student success.

In order for educators to successfully shape growth mindsets, they must be made aware of intelligence theories. While avoiding person-praise, and highlighting effort are key components of fostering a growth mindset, frequently educators of the DHH are not up to date on literature and theories typically applied to adolescents in the general education settings. Therefore, teachers of the DHH need to first understand how intelligence theories applies to all youth. Once educators understand how growth mindsets encourage resiliency, they can delve deeper and address DHH student mental models, and stigmas perceived by DHH students and their parents.

Fostering growth mindsets in DHH students may be critical in order for students to achieve success. Deaf and hard of hearing students face unique challenges with language access barriers, which hinder them from accessing the curriculum in the way the vast majority of the population would. For DHH adolescents to have the tools necessary to navigate through K-12 schooling, college, careers, and life educators of the DHH should consider prioritizing shaping growth mindsets and resilience.

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APPENDIX A: Teacher Interview Protocol

Main Research Question

In what ways do Deaf students exhibit growth or fixed mindsets?

Sub-Questions

- 1) What are teacher descriptions of how students perceive overall skills and challenges?
- 2) In what ways do DHH students exhibit effort?
- 3) What are teacher perceptions on DHH student responses to praise and feedback?
- 4) How do DHH educators define resiliency?

Interview Questions:

- 1) (Warm - up) Hello, how are you? Tell me about how you became involved in Deaf education.
- 2) (Grand- Tour) How would you describe a typical day in your classroom? **Probe:** Tell me about your students, academically what areas do they strive in? What areas do they face challenges?
- 3) What are the steps involved in providing feedback to your students, both positive and constructive? **Probe:** How might you encourage your students when they are particularly skilled in an area? **Probe:** How might you offer feedback when students are experiencing challenges in an area?

- 4) Can you tell me about a time when you provided students with praise? **Probe:** How did your students respond to this praise? **Probe:** Are there more effective ways to praise students than others?
- 5) What types of praise do you provide students? **Probe:** Can you give me examples of what you might say when providing praise? **Probe:** In what ways do you encourage students when faced with a setback?
- 6) How would you define *resiliency*? **Probe:** Can you tell me about a time when your students demonstrated resiliency?
- 7) Tell me about a time when you helped to foster DHH students' abilities to self-regulate? **Probe:** How do you motivate students who seem to be struggling more than their peers in academics? **Probe:** In what ways do you provide students feedback on strategies employed or effort exerted?
- 8) (Devil's Advocate) Would you say educators should praise students for their intelligence or innate abilities? **Probe:** How might the students react when praised for intelligence or innate abilities?
- 9) (Ideal) How would you describe the ideal DHH student's mindset? **Probe:** What characteristics would the most successful DHH student embody to make them college and career ready?
- 10) (Cool- down) Do you have anything else that you would like to add?

APPENDIX B: Field Notes Template

Field notes by _____ Date written _____

Event, activity, class, situation observed _____

Date, time observed _____ Place _____

BACKGROUND:

SETTING:

PEOPLE:

TALK & ACTIVITY:

SUMMARY OF EVIDENCE ON RQ, SUB-Qs, or THEMES OF INTEREST:

AFTER THE EVENT (if relevant):

REFLECTION:

APPENDIX C: Teacher Surveys

Main Research Question

In what ways do Deaf students exhibit growth or fixed mindsets?

Sub-Questions

- 1) What are teacher descriptions of how students perceive overall skills and challenges?
- 2) In what ways do DHH students exhibit effort?
- 3) What are teacher perceptions on DHH student responses to praise and feedback?
- 4) How do DHH educators define resiliency?

Respond to the following items

- 1) My students demonstrate resiliency when faced with a challenge.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
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- 2) I praise students on their innate skills and/or intelligence.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
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- 3) When my students don't know the answer, they usually give up.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
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- 4) I praise students on strategies used, and effort, even when they get the answer wrong.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
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5) My students are usually embarrassed about getting poor scores, and may lie about their performance to peers.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
----------------	----------	-------------------	----------------	-------	-------------

6) My students see challenges as an opportunity for growth and usually try harder the next time around.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
----------------	----------	-------------------	----------------	-------	-------------

7) My students like working hard, and learning from their setbacks.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
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8) My students often say things like, “I’m not good at math” or “I’m not very athletic”.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
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What types of positive feedback do you provide to your students?

What types of constructive feedback do you provide to your students?

How would you define resiliency?

Can you describe a time when your students demonstrated resiliency?

In what ways do you motivate students who struggle?

APPENDIX D: Student Surveys

Mindset Works (Dweck, 2012)

1. No matter how much intelligence you have, you can always change it a good deal.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
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2. You can learn new things, but you cannot really change your basic level of intelligence.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
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3. I like my work best when it makes me think hard.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
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4. I like my work best when I can do it really well without too much trouble.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
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5. I like work that I'll learn from even if I make a lot of mistakes.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
----------------	----------	-------------------	----------------	-------	-------------

6. I like my work best when I can do it perfectly without any mistakes.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
----------------	----------	-------------------	----------------	-------	-------------

7. When something is hard, it just makes me want to work more on it, not less.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
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8. To tell the truth, when I work hard, it makes me feel as though I'm not very smart.

Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
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